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AUTHOR	Lampach, Stanley; Martinet, Andre
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ABSTRACT

This study progressively examines fundamental principles of articulatory phonetics, French and English phonemics, and theoretical phonetics. The Parisian accent is examined at great length. Vowel charts and phonetically transcribed sample lexical items are included. For a companion document see FL 001 799. [Hard copy not available due to marginal legibility of original docment.] (RL)

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THE SOUNDS OF ENGLISH AND FRENCH

by Stanley Lampach in consultation with

André Martinet

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INTRODUCTION

In composing a work dealing with the pronunciation of French, several guiding principles could be followed. A purely mechanical exposé offers a means of presenting the facts in a simple manner but which gives no idea of the complexities found in the reality. Up to a certain point, such an approach has many advantages pedagogically speaking, but it is hardly conducive to an understanding of the way a language functions. For this reason a somewhat more complex method has been chosen, centered upon a description of the way the sounds of French are actually used by French speakers within the French-speaking community and not of some ideal system. This point of view, it is hoped, will permit the teacher to understand the workings of the French sound system from within, rather than from the exterior. At the same time, the latitudes revealed certainly are useful knowledge pedagogically.

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TEACHING PRONUNCIATION

In the domain of spoken language, a primary aim of the teacher of foreign languages is to inculcate an acceptable pronunciation of the language taught. To attain this end, the teacher, if he is not a native speaker, must himself acquire a proper pronunciation; it is he who must provide the main example. Some students have a good "ear" and manage to pick up an acceptable pronunciation by imitation of the teacher. Unfortunately, for the vast majority of non-native speakers more laborious methods are required; imitation alone is insufficient. The universal tendency is to carry over into the foreign language the speech habits of the native language. This gives rise to "foreign accent", a phrase which refers to the total outward effect of this tendency. The student must learn to hear and reproduce accurately the sounds of the foreign language and not to fall back upon the closest equivalents he finds in his native language. The most efficient shortcut towards this end is a working knowledge, on the teacher's part, of the way speech sounds are produced. This enables him to understand the nature of the mistakes made by the student and provides him with the tools for correcting them, and so lead the learner towards the acquirement of a correct pronunciation.

PHONETICS AND PHONOLOGY

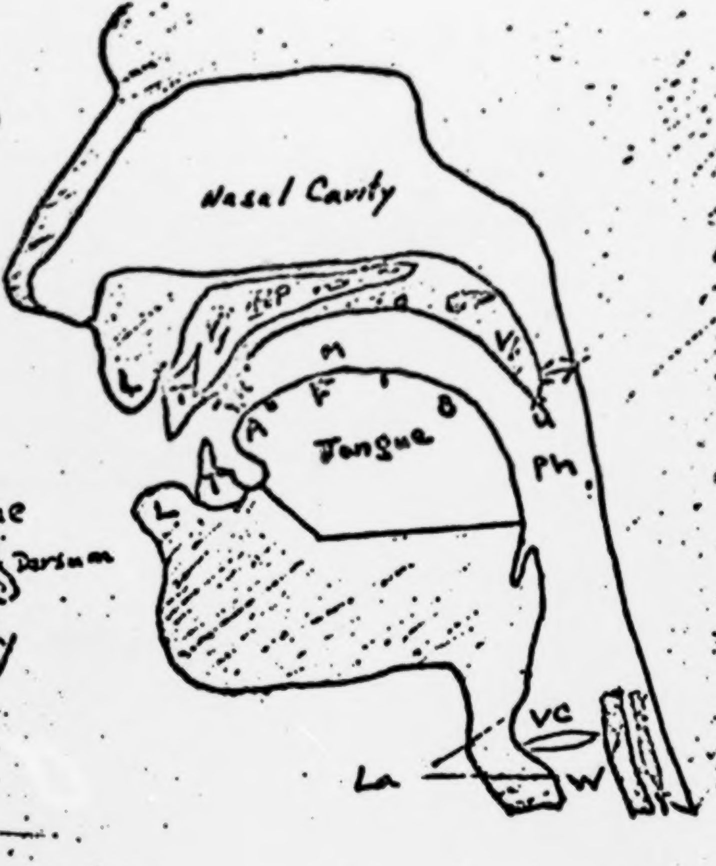
To describe in a precise and scientific manner the way a language is pronounced, linguists have recourse to two methods of approach. These are called respectively phonetics and phonology (or phonemics). The subject matter of both of these disciplines is the same; speech sounds; but their scope and their viewpoint differ widely. Phonetics deals with speech sounds in general. It may study these in terms of their mode of production by the inter-action of the organs of speech; this physiologically-oriented approach is called articulatory phonetics.

Phonology, on the other hand, is concerned, not with sounds in general, but with the use that a particular language makes of speech sounds; the choices it makes in the aggregate mass of possible speech sounds, and the way these serve to keep words apart.

Since it is phonetics which supplies the linguist with much of the

[Include un-numbered chart at the beginning (1st or 2nd page) of PHONETICS section.]

L - Lips
T- Teeth
TR- Teeth Ridge or Alveola
HP- Hard Palate
⇨- Soft Palate or
V - Velum
U - Uvula
Ph- Pharynx
La - Larynx
VC - Vocal Cords
W- Windpipe
A- Apex or Tip of Tongue
F - Front of Tongue } Dorsum
B- Back of Tongue
M- Mouth or Buccal Cavity


Nasal Cavity
HP
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⇨
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Tongue
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material and the terminology he requires for describing the phonological aspect of a language, it is necessary, first, to establish a phonetic groundwork of discussion. For language-teaching, it is articulatory phonetics that serves this purpose.

PHONETICS

The production of speech sounds arises essentially from the exhalation of air from the lungs. To reach the outer air, the air stream thus created, the product of breathing, passes from the lungs, through the windpipe, the larynx, the pharynx and out through the mouth, or the nose, or both of these simultaneously. Along this passage are found several organs capable of movement whose actions serve to convert the air stream into the sound waves which constitute the material support of spoken language. These are, following the direction of the outgoing air-stream: the vocal cords, the velum, the tongue, the lips. The positions assumed by these organs modify the size and shape of the air passage and thus impart specific characteristics of the sound waves, hence the many different kinds of speech sounds. By describing the positions and movements of these organs, it is possible to furnish a quite precise description of the way a given speech sound is formed.

The action of the organs capable of movement will be briefly described.

THE VOCAL CORDS

The *vocal cords*, situated in the *larynx*, the topmost part of the windpipe, behind the Adam's apple, are muscular bands which can be made to assume a number of distinct positions. They may be drawn together in such a way that the air-stream passing through sets them in vibration. This vibration is called *voice*. Sounds having this vibration as one of their features are called *voiced* sounds; for instance, vowel aounds generally, as the *-ee* of *bee* and some consonant sounds like the *b* of *bee* and *z* of *zipper*. Or, the vocal cords may be held well apart so that the air stream passes through without causing them to vibrate. Sounds having this feature are called *voiceless* sounds: examples: the *s* of *sip* and the p of *pea*.

THE PHARYNX AND THE VELUM NASAL CAVITY

The pharynx, at the back of the mouth, the "throat", is a point of junction between the nose cavity and the mouth. It is the movement of the velum, or soft palate, hanging at the back of the mouth, which serves to connect or disconnect the nasal cavity and the mouth passage. When the velum is raised up against the wall of the pharynx, the nasal passage is disconnected from the mouth passage and the air stream is directed out through the mouth alone. On the contrary, when the velum is lowered, the nasal cavity is included in the sound-producing tract. The sounds composing the English word pat are all pronounced with the velum raised; the two sounds composing each of the two French words: nain and mon are both pronounced with the velum lowered.

THE MOUTH AND THE TONGUE

It is in the mouth, referred to more technically as the buccal cavity, that the greatest variety of articulatory activity takes place. This is due, essentially, to the extremely great mobility of the tongue. For purposes of sound description, the roof of the mouth, which forms the fixed upper surface of the buccal air passage, is conceived as divided into several regions: the upper teeth and the teeth ridge just behind these, the hard palate, the soft palate (whose hindermost part, the uvula, an appendix-like organ, may play a relevant phonetic rôle independent from that of the soft palate). The surface of the tongue, which forms the lower side of the buccal passage, is also conceived as divided into several parts: 1) the tip (or apex) is the part of the tongue that normally lies opposite the teeth ridge 2) the front lies, at rest, opposite the hard palate, and 3) the back lies opposite the soft palate. The front and back of the tongue taken together are called the dorsum.

The mobility of the tongue is such that the various positions it may assume must generally be described by simultaneous reference to a vertical and horizontal scale.

The distance from the highest part of the tongue to the roof of the mouth, which forms the vertical scale is referred to as the degree of opening (or negatively as the degree of closure). From the flat low position it has at rest, any one part of the tongue may be raised to varying degrees of height towards a region of the roof of the mouth. The maximum raising results in the contact of the tongue with the roof of the mouth. The narrowing of the buccal passage produced by the tongue is called the constriction, and the stopping of the passage in the case of contact is called closure or occlusion. Sounds resulting from constriction and occlusion are called constrictives and stops respectively.

The horizontal scale stretches from the back of the mouth to the lips and any one of its successive positions may be referred to as a position of articulation. The constriction or the closure produced by the movement of the tongue may take place at any point between the teeth and the back part of the soft palate. For this reason, it is necessary, when describing the production of a sound of speech, to specify: 1) the part of the tongue - tip, front, back - that produces the constriction or the closure, and 2) the region of the roof of the mouth approached or touched, because a given part of the tongue, or the lower lip may be moved towards one of several regions of the roof of the mouth.

Besides these movements of the tongue, there also exists the possibility of modifying the shape of the tongue surface. The sides of the tongue may be contracted; the tip may be gooved along its median axis, or may be made to vibrate against a region of the roof of the mouth. The uvula, the hindermost part of the soft palate, may also be made to vibrate (against the back of the tongue).

THE LIPS

The lips also may play a relevant role in sound production. The upper lip represents the front limit of the scale constituted by the upper fixed organs of the roof of the mouth. The lower lip is a mobile organ functioning in many respects like one of the mobile regions of the tongue. However, the lip movements and positions are not exactly parallel to those of the tongue. Starting from the position they have at rest, their neutral position, the lips may be pushed forward. This protrusion is called rounding. The lips may also be spread, that is, the corners of the mouth may be drawn apart and the lips pulled back against the teeth. The final sound of English tea is pronounced with spread lips and that of English too with rounded lips.

The lower lip, like the tongue, may serve to narrow or close the air passage (see degree of opening, above). The upper organ, in this case, may be either the upper lip or the upper teeth; examples: the sounds p and f respectively, as in English put and fog.

VOWELS AND CONSONANTS

For purposes of language study, speech sounds are usually assigned to one of the two general categories called vowels and consonants. Briefly, vowels are characterized by a relatively greater degree of opening than consonants; the tongue is held lower than for consonants and the stream of air passing through the buccal cavity encounters relatively less obstacle. Normally vowels are voiced sounds. Their specific qualities, such as those which distinguish, for instance, between the vowel sounds of the French words: pie, pas, pou, are produced by the action of the tongue and lips which modify the size and shape of the buccal cavity. The highest point of the tongue divides the buccal cavity into two connected chambers; the size and shape of the back chamber is controlled by the tongue position, the front chamber by both the tongue position and the lip position (spreading decreases and rounding enlarges). Vowels are characteristic examples of a sound-type called resonants.

Consonants may show either a great constriction of the air passage or a momentary closure of the passage (see remarks on degree of opening, above). In the first case, the air passing through a narrow channel produces friction noises of various kinds whose specific qualities depend upon the position of the movable organs. For the second type of consonant, the release of the stopped up air produces an "explosion" whose characteristics also depend upon the position of the movable organs.

The difference between these two general sound types - vowels and consonants - is, in many respects, a difference of degree rather than one of kind. The more extreme examples of each class are well characterized, but there exist also borderline cases which are difficult to classify on a purely phonetic basis, since they may have many of the resonance qualities of vowels but also consonantal characteristics.

The articulatory phonetic criteria for describing vowels and consonants, although in many ways parallel, are not exactly the same. For this reason each class will be treated separately.

The classification of vowels (1)

Vowel sounds are of two general types: pure vowels (monophthongs) and diphthongs. Pure vowels may be defined in terms of a given stable position of the articulatory organs. Diphthongs, on the contrary, are sounds during whose emission the speech organs show perceptible movement. They must be defined either in terms of this movement (called a glide) or in terms of their starting point and the ending point towards which they tend. The movement is from a more prominent vowel sound towards a less prominent one most often having a higher tongue position. Diphthongs are sometimes considered to be composed of two distinct successive sounds. The vowel sounds of the English words: bee, boo, bow (-tie), bay, bough, buy, boy are generally diphthongs. The vowels of the English words: pit, put, putt, pat and those of French generally are pure vowels. Pure vowels and diphthongs taken together form the class of vowel nuclei. However, as pure vowels (monophthongs) constitute the basic irreducible vowel units, it is with these that the following discussion shall deal mainly.

BASIC FEATURES OF VOWEL DESCRIPTION

Vowel sounds are described and classified phonetically according to a number of features which, when combined, give a valid account of the shape of the cavities involved.

A. Basic features:

1) height of the tongue, or, degree of opening
2) the part of the tongue raised, or tongue position
3) the lip position

Features 2 and 3 are closely allied; together, they form the position of articulation.

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1) *Height of the tongue*, or *degree of opening*. Variations of tongue height serve as a differentiating feature of vowels. For linguistic purposed, it suffices to distinguish between three fundamental degrees of tongue height: *low*, *mid* and *high*. Each of these may be further subdivided into a high and a low constituent: thus *high mid* and *low mid*. High vowels are often referred to as *close* vowels and low vowels as *open* vowels.

2) The part of the tongue making the narrowing, or *tongue position*. Vowels are classed as *front* or *back* or *central* according to the part of the tongue that is reaised highest. In the formation of front vowels, the front of the tongue approaches the hard palate; for back vowels, the back of the tongue approaches the soft palate. When languages having both front vowels and back vowels also have vowels whose tongue position at a given degree of opening is intermediate between those of the corresponding front and back vowels, phoneticians refer to this intermediate class as *central vowels*.

3) The lip positions for vowels are *rounding* (lips protruded) and *spreading*. When the lips are spread many phoneticians say that the sound produced is *unrounded*, and this latter term applies as well to sounds produced with neutral lip position (that it, neither rounded nor spread). Generally, the difference between rounding and spreading decreases as the degree of opening increases. When the rounded lip opening is rather large, many phoneticians speak of *open lip rounding*, when it is relatively small, of *close lip rounding*.

The *front-spread* position of articulation, which corresponds to the smallest cavity in the front of the mouth and the *back-rounded* position which corresponds to the largest cavity formed in the front of the mouth seem to be the most frequent positions of articulation that occur in the languages of the world, and are, for this reason considered as primary. The two other possible combinations of tongue and lip position: *front-rounded* and *back-spread*, both characterized by a more medium-sized front cavity in comparison to those of the primary positions, are taken as secondary.

A basic classification of vowels may be established in terms of the features *degree of opening* and *position of articulation*. Such a scheme is useful as a standard of reference, and, at the same time, furnishes the phonetic symbols for noting vowel sounds.

EXTREME VOWELS

I, with the lips *spread*, the front of the tongue is advanced as far forward as possible and as *high* as compatible with its quality as a vowel towards the hard palate, the sound produced is illustrated by the vowels of the French words: *si*, *lit*, *pie*, etc. The vowels of the English words: *tea*, *sea*, are of this type, but they are most often pronounced as dipthongs and not as pure vowels. The phonetic symbol for this vowel is [i].

If the tongue is held as low as possible in the mouth, which is well open, the sound produced is of the a-type. For this degree of opening, the maximum, the lip position may be neglected. If, however, it is necessary to distinguish between an open vowel having a front tongue position as in French *palte*, and one having a back tongue position as in French *pâte*, the symbol [a] or [à] is used for the first and [a] or [â] for the second. When just one symbol is required, normal printed [a] is used.

If the lips are *rounded* and the *back* of the tongue raised as high as compatible with vowel sound quality towards the soft palate, the sound produced is of the type illustrated by the vowels of the French words, *pou*, *chou*, *mou*. The vowel of the English words *ooze*, *too*, are also of this general type, but they are most often pronounced as dipthongs, not as pure vowels. The phonetic symbol for this sound is [u].

INTERMEDIATE VOWELS

Between [i] and [a], it is possible to have front-spread vowels with an intermediate degree of opening. The *high-mid* front spread vowel, noted [e] (or [ẹ]) and the *low-mid* front spread vowel, noted [ɛ] (or [ę]). Examples of the former are the vowel of the French words *thé, pré*: the vowel of the English words *may, mate,* is a diphthong that begins as [e]. Examples of the latter are the vowel of the French words: *elle, sept, aise,* and of the English words: *met, sell, check.* Likewise, it is possible to have, between [u] and [ɑ], back rounded vowels with a degree of opening intermediate between these two extremes. The *high-mid* back rounded vowel, noted[o] (or [ọ]), may be illustrated by the vowels of the French words: *rose, eau, pot.* The vowel of the English words: *rose, so,* are generally pronounced in most American usage as diphthongs that being as [o]. The *low-mid* back rounded vowel, noted [ɔ] (or [ǫ]), may be illustrated by the vowel of the French words: *porte, fort;* the vowel of the English word *law* is also often of this same general type.

Vowels having a tongue position intermediate between that of mid and high front vowels and mid and high back vowels respectively are called *central* vowels. The final vowel sound of the English word *sofa* is a mid central vowel whose tongue position is approximately intermediate between that of the front spread mid vowel of *met* and that of the back rounded vowel of *law.* The phonetic symbol for the central mid vowel is [ə]. When it is also necessary to note a close central vowel the symbol used is [ɨ].

THE VOWEL TRIANGLE

All this information on vowels is presented in a condensed and conventional manner by means of a table which often has the form of an inverted truncated triangle, whence the name *vowel triangle,* or some simplified derivative of this figure, which provides a stylized reproduction of the relative positions of articulation and degree of opening of the different vowel sounds. Each symbol represents an articulatory zone rather than a point. The table is modified as needed to present the vowel sounds of a particular language.

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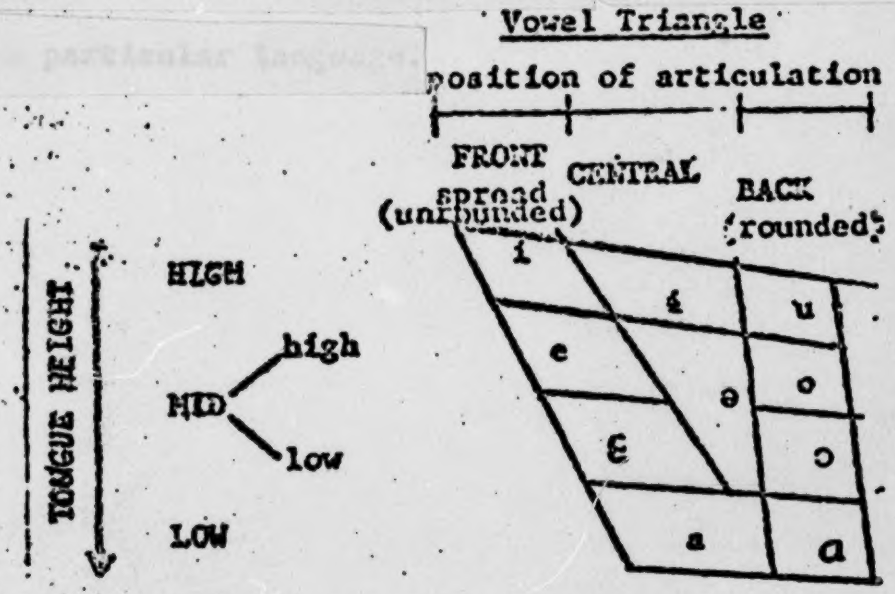

The front-spread and back-rounded vowels listed here do not constitute an exhaustive list. For instance, the vowel sound of the English word at is not given. Phonetically, this sound is a front-spread vowel whose tongue height is intermediate between that of [ɛ] and [a], on the i-a line. It is a high open vowel, and is noted [æ]. Note that [a] is too opened to be rounded.

Besides the above combinations of tongue and lip positions, it is also possible to have front-rounded vowels and back-unrounded vowels. Front-rounded vowels are noted by the means of the following symbols: [y] for a high front-rounded vowel as in French tu, mur, [ø] or [φ] for the high-mid, as in French peu, feu, and [œ] or [φ] for the low-mid, as in French heure, veuf. Back-spread vowels need not concern us here, as it is possible to describe both English and French without reference to vowels of this type.

DIPHTHONGS

Diphthongs. Diphthongs are characterized by a perceptible movement of the speech organs during their emission. It is this movement which produces the modification of the quality of the sound in the course of its utterance. In contradistinction to the pure vowels (monophtongs) which have been described in terms of specific *positions* of the speech organs, diphthongs must be defined in terms of two criteria: their starting-point and end point or the direction of the movement away from that starting-point. Diphthongs may be grouped according to either one of these features. The English word *my* contains a diphthong whose starting point is [a] and whose movement is towards [i] (it is written [ai̯]; likewise, in the word *say*, the starting point of the diphthong is [e] and the movement of the glide is also towards [i] ([ei̯]). In *boy*, the movement is from [ɔ] towards [i] (written [ɔi̯]). In *me*, the glide is from a lower [i] towards a higher [i]; it is written [ii̯]. Other diphthongs may have a glide towards the high-back rounded vowel [u]. In the word *how*, the diphthong starts from [a] and moves towards [u]; it is written [au̯]. In the word *row*, the diphthong starts from [o] and moves towards [u]; it is written [ou̯]. In the word *boo*, the glide starts from a lower variety of [u] and moves towards a higher variety: written [uu̯]. The mark [̯] placed under the second symbol which indicates the direction of the glide marks the fact that this second element is the less prominent one. It should be noted that, in reality, the notations [i̯] and [u̯] indicate only the direction of the glide; the degree of closure of [i] or [u] is not attained generally. For [ai̯], the closure may often only reach that of the vowel [ɛ]; for [au̯] that of [ɔ] or [o̯]. In fact it would probably sound incorrect to extend the glide to the extreme limit suggested by the notation. Some linguists consider diphthongs to be a sequence of a vowel followed by a consonaltal glide.

CENTERING DIPHTHONGS

Besides these diphthongs, there exists another kind, whose glide is towards the articulatory position of a central mid vowel. These are called centering diphthongs. Thus, in the kinds of English speech where an r-sound is never pronounced when another consonant follows it or when it would end a word, centering diphthongs are heard in words like pier [piə̯], poor [puə̯] and beard [biə̯d]. Also, these same speakers often use centering diphthongs in words like pair [pɛə̯], air [ɛə̯], and paw [pɔə̯], roar [rɔə̯]; other speakers use here a long pure vowel [ɛ̄], [ɔ̄]. The second element [ə̯], may also occur after diphthongs as in the words fire [fai̯ə̯]; power [pau̯ə̯].

ADDITIONAL VOCALIC FEATURES

In addition to these features of degree of opening and position of articulation, which are general in scope, other features of more limited occurrence may also serve to differentiate vowel sounds. Those that concern English or French are:

1) presence or absence of nasal resonance (i.e. whether or not the nasal cavity is open to the air stream); nasal/oral

2) length or duration. long/short

3) muscular tension of the various organs or parts of the vocal tract: tense or lax.

NASALITY

1) nasal/oral. Vowel sounds may be produced with the velum raised or lowered. Sounds produced with the velum raised, so that the air stream passes out through the mouth alone are called oral vowels. Vowels produced with the velum lowered so that the nasal cavity is open to the air stream are called nasal or nasalized vowels. In French, banc differs from bas just because its vowel is nasalized. Bas has a low oral vowel and banc a low nasal vowel. Nasal vowels are marked by

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placing a tilde (˜) over the corresponding oral vowel: ã. [ba] - [bã].

DURATION

2) *long/short*. Vowel sounds may vary in their duration. Sounds otherwise similar may differ quite perceptibly with respect to their relative duration. Sometimes such differences are found in identical positions within words, sometimes they are bound up with differences of position or with differences of stress. Diphthongs are often grouped together with long vowels, because their duration is of the same order. Length is indicated, when necessary, by placing a macron (¯) over the vowel: ā.

TENSION

3) *muscular tension*. *tense/lax.* According to the degree of muscular tension employed for their production, vowels may be classed as *tense* or *lax*. These terms are used particularly by writers on English phonetics to describe the difference between the vowels of pairs of words like *beat* and *bit*, *fool* and *full*, and sometimes between pairs of lower vowels like *bait* and *bet*. Actually, the difference between tense and lax seems to concern not only the muscular tension of the articulating organs, but also the degree of opening and the position of articulation, and length. Lax vowels tend to be lower, (shorter), and to have a position of articulation closer to the neutral position of the articulating organs, that is, more central. Thus, a tense high front vowel, like that of *beat*, has greater tongue height and a more front tongue position than the corresponding lax vowel, that of *bit*. It is also longer, and often pronounced as a diphthong.

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The classification of consonants

Consonants are classified and described according to the following criteria:

1) their manner of articulation

2) their position of articulation

3) vocal cord activity. voiced/voiceless

Secondary concomitant features:

4) aspirated/non-aspirated

5) strong (fortis)/weak (lenis)

MANNER OF ARTICULATION

This criterion refers to the characteristics of the obstacle encountered by the air stream. Consonants are of two basic kinds: 1) those having a momentary complete closure of the air passage as a phase of their production; and 2) those having a partial closure - a narrowing - of the air passage. If, in a given position of articulation, the air passage is completely stopped momentarily, and then reopened suddenly, the sound produced is called a *stop* (or *plosive*, or *occlusive*). The part of the stop up to the reopening or *release* is called the *implosion*, and the release, the *explosion*. Examples of stops are the initial sounds of the English words: *pill*, *bill*, *till*, *dill*, *kill*, *gill*, noted phonetically [p], [b], [t], [d], [k], [g], respectively. A stop made with the vocal cords is called a *glottal stop*, noted [ʔ]. It is not a regular speech sound of English or French.

FRICATIVES

When a narrow channel remains open during the entire emission of a consonant sound, the air passing through produces friction noises. Such sounds are called *fricatives*. Fricatives that are laxly articulated are sometimes referred to as spirants. Since, during their articulation, the air channel is never completely closed, fricatives, spirants and, generally, sound types other than stops are referred to as continuants. Examples of fricatives are the initial sounds of the English words: fear, veer, thin, there, sear, zoo, sheer, here and the second consonant sound (symbolized in the spelling by the letter s) of the word leisure. These sounds are noted [f], [v], [θ], [ð], [s], [z], [š], [h], [ž], respectively.

AFFRICATES

There also exist consonant sounds which begin like stops but which end like fricatives. These are called affricates. The initial sounds of the English words cheer and jeer are affricates. They are noted [č] and [ǰ] respectively in phonetic writing. Affricates are often considered as a special ~~kind of~~ stop having a slow release.

SEMI-VOWELS

The so-called semi-vowels are consonantal sounds articulated with the same tongue and lip positions as the highest (or closest) vowels but either with an audible friction or such contextual ~~xxx~~ use as to suggest a consonantal function. English has two semi-vowels, illustrated by the initial sounds of the words yes (phonetic notation [j]) and we (phonetic notation [w]). French also has these: yeux [j] and oui [w], plus a third one, as the initial sound of the word huile [ɥ]. Except for their usually greater tongue height, these sounds have the tongue and lip positions of the vowels [i], [u], and [y] respectively.

In those varieties of American English where the final syllable of better may be said to present a vocalic [r], it is not misplaced to consider the [r] of red, its consonantal equivalent, as a semi-vowel too.

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NASAL CONSONANTS

Other features besides the degree of obstacle encountered by the air stream are relevant to the criterion of manner of articulation. For instance, the velum may be lowered, opening the nasal cavity to the air stream. Consonant sounds whose production involves the participation of the nasal cavity are called nasal consonants. They are characterized by 1), a stop articulation in the mouth which is made with the lips or the tongue and is responsible for their specific acoustic differences between the consonants of this type, and 2) the passage of air through the nasal cavity. Consonant sounds produced with the velum in its raised position, touching the back wall of the pharynx and closing the nasal cavity to the air stream, are called oral consonants. Examples of nasal consonants are the final sounds of the English words: rum, run, rung; they are noted phonetically: [m], [n], [ŋ]. The English oral consonants having the same place of articulation as those are: [p, b, t, d, k, g] according to the following pattern:

oral	p b	t d	k g
nasal	m	n	ŋ

French has a nasal consonant [ɲ], as in the word digne. Its position of articulation is that of [j].

LATERALS

The shape assumed by the tongue may also modify the characteristics of the obstacle. Thus the middle part of the tongue may be in contact with a part of the roof of the mouth, closing the central part of the air passage, but the sides of the tongue may be so contracted that the air is allowed to pass along one or both sides of the tongue. Sounds made in this manner are called lateral sounds. The most frequently encountered lateral is the l-sound. For its production, the tip of the tongue may be in contact with the teeth ridge, or with the upper teeth. The phonetic symbol for these sounds is [l].

HISSING SOUNDS

For the production of the English fricative sounds [θ] and [ð], the tip of the tongue is raised toward the region of the upper teeth, to make a fricative-type constriction. At the same time, it is held flat, so that the air passage at the position of articulation is much wider than it is high; forming, when seen in cross-section, a slit-like opening. When the tongue is raised towards this same general area (upper teeth or teeth ridge), but with the form of the tip of the tongue modified in such way, that instead of being flat, a groove is formed along its mid-line (i.e. the sides of the tongue tip are raised and the center depressed), the air stream passing through a very narrow channel and directed in part, at least, against the lower teeth gives rise to another type of sounds, called hissing sounds or sibilants. With regard to their manner of articulation they are called groove fricatives; whereas [θ] and [ð] are examples of slit fricatives. Examples of sibilants are the initial sounds of sue and zoo. They are noted phonetically [s] and [z].

HUSHING SOUNDS

Another type of sound allied to the sibilants are the hushing sounds or shibilants. The initial sound of the English words: sheer, shall, and the second consonant sound of the word leisure (corresponding the letter s in the spelling) are of this type. They are noted in phonetic writing [š] and [ž], respectively. In their formation, the entire body of the tongue is raised forming a narrow channel extending from the region of the teeth ridge to the back of the soft palate. The affricate consonants that are the initial sounds of words like *cheer* and *jeer* also belong to this category. Sounds of this type are often accompanied by lip-rounding.

VIBRANTS

A number of sounds may be produced by the vibration of a speech organ. The two elastic organs capable of vibration are the tip of the tongue and the uvula. The tip of the tongue may be made to vibrate against the roof of the mouth in the region of the teeth ridge or alveola. The result is a *trilled* or *rolled* r. It is noted [r]. The uvula, the hindermost part of the soft palate may be caused to vibrate against the back of the tongue. This serves as one of the r-sounds of French; it bears the name of "r grasseyé". It is noted phonetically [R]. A uvular fricative sound, another French sound, closely allied phonetically to [R], is also called "r grasseyé"; it is noted [ʁ].

Vibrating sounds, or vibrants, are formed by a rapid succession of several closures and releases, called taps. When the movement is reduced to a single short tap, the sound produced is called a flap. In some kinds of American English usage [t] and [d] are replaced by a flap when they occur between two vowel sounds, as in the words: *platter*, *ladder*, *escalator*; the r-sound of the Spanish word *pero* is also of this type.

POSITION OF ARTICULATION The criterion of manner of articulation referred to the characteristics of the obstacle - narrowing or closure of various types. The criterion of position of articulation refers to the place where the obstacle to the air stream in consonant articulation occurs. The points of reference for this criterion are represented as being distributed along a horizontal axis extending from the front

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to the back of the air passage. The place of narrowing or closure for consonants may be anywhere between the lips and the larynx. Because of the relative mobility of the lower lip and the part of the tongue which produce the narrowing or closure of the air passage, it is necessary to indicate the movable organ involved, and at the same time, the part of the roof of the mouth towards which it is raised. For purposes of consonant description, the tongue, as we have seen, is divided into two main sections: the tip or apex and the surface behind the tip, which is referred to as the dorsum. Sounds made with the lower lip as the movable organ are called labials; those made with the tip of the tongue are called apicals, and those made with the dorsum, dorsals. The upper part of the air passage is labelled as follows: the upper lip, the upper teeth, the teeth ridge (or alveolae), the hard palate, the soft palate, the uvula, (the pharynx, the larynx). The correlation of a movable organ with a region of articulation results in the following possible positions of articulation:

Movable organ (or lower articulator)	Region of articulation (or upper articulator)	Designation of position of articulation	Examples
lower lip	upper lip	bilabial	p, b
lower lip	upper teeth	labio-dental	f, v
tip (apex) of tongue	upper teeth	(apico-)dental	E. θ, ð F. t, d
tip (apex) of tongue	teeth ridge (or alveolae)	(apico-) alveolar	E. t, d
tip (apex) of tongue	hard palate	retro-flex(or apico-palatal)	E, t, d, after r in some American usages
dorsum (the front part)	hard palate	(dorso-) palatal	j, ɲ
dorsum (the back part)	soft palate (or velum)	(dorso-)velar	k, g, ŋ
dorsum (the back part)	uvula	(dorso-)uvular	R, ʁ

vocal cords	larynx	glottal	h

VOCAL CORD ACTIVITY

voiced/voiceless. Consonant articulations accompanied by vocal cord vibration - voice - are called voiced consonants. Consonant sounds not having this vibration are called voiceless. Stop and fricative types of sound often occur in pairs which have the same manner and position of articulation, but differ uniquely by the presence or absence of voice. In both English and French many such pairs exist. Some English examples of pairings are as follows:

	bilabial	labio-dental	alveolar	hissing	hushing	velar
voiceless	p	f	t	s	š	k
voiced	b	v	d	z	ž	g

The voicing or the voicelessness may coincide quite exactly with the beginning and end of a consonant sound or it may exist only during part of the duration of the sound. Nasal consonants and semi-vowels usually occur as voiced sounds, but they may also occur voiceless.

SECONDARY CONSONANTAL FEATURES

ASPIRATION

When the release of a (voiceless) stop consonant has as an accompanying feature a breath - an [h] sound - the stop is said to be aspirated. Sounds not having this feature are unaspirated. The initial sounds, [p], [t], [k], of the English words: pin, tin, kin are aspirated. However, when these sounds occur after [s] (and also before an unstressed vowel) they are unaspirated, as in the words: spill, still and skill. When it is desired to note in phonetic writing that a stop is aspirated, this is indicated by means of an inverted apostrophe: [pʻ].

			Labials		Apicals				Dorsals			
			Bi-labial	Labio-dental	Dental	Alveolar	Palato-alveolar	Retro-flex	Palatal	Velar	Uvular	Glottal
STOPS and AFFRICATES	voiceless		p E pipe F pape		t F ta	t E toot	č E chill		k̮ fronted variety of F k	k E cow F cou		ʔ
	voiced		b E bib F barbe		d F dos	d E dud	ǰ E judge		g̮ fronted F g	g E go F gout		
FRICATIVES and SPIRANTS	voiceless	slit		f E for F fin	θ E thin							h E hat
		groove				s E so F sot	š E shell F chaud					
	voiced	slit		v E veil F vu	ð E the						ʁ Parisian F rue	
		groove				z E zoo F zoo	ž E leisure F jour					
LATERALS					l F lit	l E love						
VIBRANTS and FLAPS	vibrant				Scottish regional	r E rose F rue					R Parisian F rue	
	flap					N.Y.C. E ladder						
SEMI-VOWELS and FRICTIONLESS CONTINUANTS			(w)(ɥ) E we F huit F oui			ɹ American E red		ɻ variety AmE red	j (ɥ) E year F yeux	(w)		
NASALS			m E mom F même		n F ni	n E nine			n F digne	ŋ E king		

MUSCULAR ENERGY

strong (fortis)/weak (lenis). Consonants are often divided into two classes: strong and weak, according to the impression of greater or lesser muscular tension exerted for their production. This feature parallels generally that of 3) voiced/voiceless. Voiceless sounds are strong (fortis) and voiced sounds weak (lenis). However, in certain very particular circumstances, which will be discussed later, voiceless weak and voiced (at least partially) strong also occur.

TABLE OF CONSONANTS

All this information may be summarized in a phonetic table of consonants, like the one below:

Along the horizontal axis of the grid are listed the positions of articulation starting from the lips and moving back into the air passage. The various manners of articulation are listed along the vertical axis. The table is not complete. It only contains sounds of interest for the study of French and English pronunciation.

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THE SYLLABLE

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Speech sounds - vowels and consonants - fall into groupings called *syllables*. Phoneticians are not all agreed upon what a syllable actually is. Some define it in terms of peaks of sonority or prominence. Each syllable contains one peak, generally a vowel sound, which is the point of greatest opening. Syllable divisions are very often a mechanical function of the succession of vowels and consonants in the spoken chain of speech, at least, within words. Thus, in French, a consonant occurring between two vowels goes with the second vowel: *bateau* [ba-tǫ], *matou* [ma-tu].

According to whether a syllable terminates in a vowel or a consonant sound, it is termed *free* or *checked*: the two syllables of both the words cited above are free: they end in a vowel. Both the syllables of the French word *largeur* [laʀ-ʒœʀ] are checked syllables as they terminate in a consonant sound.

When on either side of a syllable boundary, the consonant checking the first syllable and the consonant beginning the following syllable are the same, they fuse to form a single long sound (i.e. held longer than the corresponding simple sound), and phoneticians speak of a *geminated* consonant. Geminated consonants may often be considered to be a particular case of a sequence of two consonants Cf. French *il l'a dit* [illadi].

STRESS OR ACCENT

Syllables may be *stressed* or *unstressed* (the terms *accented* and *unaccented* are also employed). Stress may be defined as the [illegible] prominence, within a chain of syllables, granted to one syllable. The nature of the prominence may vary from one language to another. A more forceful articulation (force), lengthening (length), a higher tone (pitch), may each, alone, or in various combinations of two or three of these, be used in a particular language to obtain this prominence.

SYLLABLE DIVISION

It is important not to confuse the syllables of spoken language referred to above with the so-called syllable divisions applied to cut up *written* words when lack of space makes it impossible to write the entire word on the same line. For instance, the French word *honnête* would be divided according to spelling conventions hon-nê-te, but the division into spoken syllables would be [ǫ-nęt].

ASSIMILATION

In the spoken chain, a sound may lose, gain or replace one or more of its phonetic traits under the influence of a neighboring sound. This process is called *assimilation*. This phenomenon may occur within words, but more often between the contiguous initial and final sounds of words occuring in sequence. Thus, in the French word *robe*, the final [b] is normally voiced, but when the [b] is immediately followed by a voiceless sound it is unvoiced, the b in the phrase *robe claire* [robkler] is pronounced without voice under the influence of the following [k] which is a vioceless sound. (To indicate in phonetic writing this unvoicing a small circle is placed under or over the symbol representing the sound affected. Thus: b̥, d̥, v̥, z̥, ž̥, l̥, m̥, n̥, r̥, g̥. To indicate that a voiceless sound in pronounced with partial voice when followed by a voiced consonant, a special mark is placed under the consonant as follows: s̬, t̬, etc. Examples: French *chaque jour* [šak̬žur].

In the English phrase, this year, many speakers pronounce the final sound of this, not as the usual s-sound heard in isolation, or before a vowel, but an s-sound with considerable hushing quality, or even as [š]. This is assimilation of position of articulation.

PHONOLOGY OR PHONEMICS

A purely phonetic approach to the study of the sounds of a language cannot by itself reveal the way in which sounds are used within the frame of that language. The human speech organs are capable of producing a countless variety of sounds which are all concretely different from one another. However, all these differences do not play an equivalent rôle in the frame of a language in which they occur; they are not all on the same plane. In its function as a medium of communication, each Language makes use of only a limited number of sound differences to keep words apart, whereas the remaining differences do not possess this word-discriminating property. The nature and characteristics of the word-distinguishing differences vary from language to language.

PHONEMES

Sound differences which by themselves may serve, in a given language, to keep words apart are called phonemes. This means, that if, within a word, one phoneme is replaced by another, a new word (or something unrecognizable as the original word) is produced. Thus, in English, if, starting with the word pat /pæt/, the initial element /p/ is replaced by /b/ a new word bat /bæt/is formed; /p/ and /b/ are thus distinct phonemes in English. If, now, [æ] of pat is replaced by [ɛ], a new word, pet is produced; thus /æ/ and /e/ are distinct phonemes in English. Finally, if the [t] of pat is replaced by [d], a new word pad /pæd/ is obtained. Through this procedure of substitution, not only are the phonemes isolated, but, at the same time, words may be analyzed into their constituent phonemes. The same result may be obtained by seeking out and comparing in a language, pairs of words differentiated by a single element. The existence, in English, of pairs of words of this type - called minimal pairs - such as pet/bet, pear/bear, rip/rib, etc., all show that /p/ and /b/ occur in exactly the same phonetic environment (as in the first pair, before (-ct). From the speaker's standpoint, it may be said that he makes a choice between the phonemes that may appear in a given context according to what he intends to say: pet or bet, pear bear, etc.

SOUNDS AND PHONEMES

It is important to clearly seize the distinction that is made between sounds and phonemes. Differences of sound are material differences which may be measured in all cases by means of acoustical instruments, and which may be perceived by ear in many cases - the number, in this latter case, depending variously upon the acuteness of hearing of the observer his native language and training. Phonemic differences are represented in actual speech by differences of sound, but not all differences of sound, even when they can be readily perceived by ear, are phonemic differences. The criterion for establishing phonemes is founded upon the word-distinguishing power of a sound difference within the frame of a given language not upon the existence of material Two or more sounds, materially quite different from each other, may all represent the same phoneme.

In the English words: tale, stale, sit, sitter, we find that the

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initial sound of tale is aspirated, the second sound of stale is not; the final sound of sit is most often not released, and the third sound of sitter is very often pronounced in American English as a flap. Yet, these four sounds all represent the same phoneme /t/. At the same time English speakers would concur that these sounds are all

the "same", for the speakers of a language react, not to the differences of sounds as such, but to differences between phonemes. However, what is important to retain here is that the difference between these four sounds can never serve in English by themselves, to distinguish one word from another. The differences between each of these "t-sounds" depend upon the phonetic context in which they occur, that is, the appearance of any one of these sounds is predictable from the examination of the phonetic environment.

CONTEXTUAL VARIANTS : Sounds which stand to each other in such a relationship are called the variants of a phoneme. Because their difference is dependent upon the phonetic context, they are called contextual variants (also, positional variants, combinatory variants and allophones). Contextual variants may depend not only upon their place of occurrence - initial, final, medial - but also upon the nature of a neighboring sound; thus, the [k]-sound of the English word carp has a tongue position that is considerably further back in the mouth than the k-sound of the word keep. The difference between the two parallels the tongue position of the following vowel: back in carp and front in keep. The utility of using minimal pairs for establishing phonemic differences is that they afford clear and immediate proof that no contextual conditioning, as in the case of contextual variants, is involved.

SOCIAL OR INDIVIDUAL VARIANTS

Besides contextual variants, there also exist variants which are dependent upon social or individual factors. The French phoneme /r/ has as variants two sounds that are quite different from each other: one is a trill produced by the vibration of the tip of the tongue against the teeth ridge (trilled r) and the other, a rather laxly articulated uvular fricative (Parisian r, r grasseyé). The occurrence of these sounds is not conditioned by the phonetic context; their use is related to the social and/or regional origins of the speaker. They are variants of the same /r/ phoneme in French, because the replacement of the one by the other can never alter the identity of a given word. As far as communication through the medium of the French language is concerned, they have the same value.

NOTATION

Because differences of sound and differences of phonemes do not necessarily coincide, a notation of speech must take care to indicate whether the point of view is phonetic or phonemic. In the former case, the notation is enclosed in square brackets [ ], and in the latter case, with slant lines / /. Thus, for French, the difference between a trilled r and a uvular fricative r would be distinguished in the notation: [r] and [ʁ] respectively. However, both of these would be transcribed phonemically /r/, the Roman letter, a more commonplace symbol (i.e. found on all typewriters, Linotype machines, etc.) being used to mark the phoneme, when possible.

EACH EACH LANGUAGE HAS ITS OWN WAY

The phonemic point of view corresponds closely to the way the native users of a language hear and employ speech sounds in order to communicate with one another. Setting forth the phonemic distinctions of a language, seems to the native speakers of that language, like a statement of very obvious truths: for instance, that /p/ and /b/ are distinct phonemes in English. However, it must be kept in mind that each language has its own particular way of organizing and using the sound differences which serve in its frame to keep words apart. And differences which serve this end in one language may not do so in another. It is here that must be sought a major origin of the difficulties encountered in learning to speak a foreign language. For instance, it is often found that a phoneme in one language has no equivalent in another. Thus, among the voiceless fricatives of English, a distinction is made between three phonemes in the area running from the labio-dental region to the alveolar region; these are: 1) the labio-dental /f/, English fin; 2) the dental /θ/, English thin; 3) the alveolar groove (hissing) /s/, English sin. In this same area, French has only two fricative phonemes: /f/ and /s/; it shows a gap where English has /θ/. French speakers learning English often replace spontaneously [θ] by [f] or by [s], the closest fricative equivalents they possess for this English sound or by [t] the dental stop corresponding to [ð Another example to illustrate this lack of congruence in the way phonemes are used and delimited is the following: it is generally only after considerable practice that French speakers learning English succeed in distinguishing the English words beck, back, bock. The words beck and bock are clearly distinguished, but the word back is generally rendered as identical with either beck or bock. The reason for this confusion is that in the articulatory area of the vowel phonemes which keep these words apart - /ɛ/, /æ/, /a/ respectively - front-spreading vowels with low-mid to low-degree of opening, French makes a distinction between two phonemes only: as in the words bec /ę/ and bac /a/, and the vowel of back /æ/, whose articulation falls between these, is interpreted variously as identical with one of the two possibilities the French speaker has at his disposal.

DANGER OF TRANSFER

These examples all confirm the fact that the usual tendency-and a persistent one-is for speakers to interpret the phonemes of the foreign language through the mesh of phonemic distinctions existing in the native medium and to employ, in the foreign language, sounds of the native language in place of those used by speakers of the foreign language. The sound of the foreign language is identified on the basis of its perceived similarity - here a relative and subjective notion - with a sound representing a phoneme of the mother tongue, and not on the basis of what it represents in the foreign language. Such transfers may render a word unintelligible in those cases where the closest approximation a speaker can find produces a confusion between phonemes as in the preceding examples or as when a French speaker pronounces the English word bit with his French /i/ which English speakers tend to hear as beat. In other cases, however, this inter-linguistic transfer of sounds may only produce an effect that sounds foreign but which causes no confusion of phonemes as the use of an initial aspirated alveolar [t] in the French.

word tasse, fête, toujours. In a few cases, the transfer passes entirely unnoticed. If it may seem to some teachers pedagogically valid to use this last type of relation as a starting point for practical teaching, it should never be forgotten that the phonemes of a language are all members of an autonomous, self-contained, and unique organization. A phoneme can only be defined in terms of the other phonemes of the same language and never in terms of the phonemes of other languages. This means that from a strictly scientific point of view, difference is everywhere present when comparing phonemes of two different languages although it may not be everywhere apparent, for there certainly does exist here a certain degree of phonetic overlapping. To teach, for instance, as is sometimes done, that the vowel of the American English word but and that of the French word botte are the same phonetically can be nothing more than a rather gross and inexact teaching aid, for if the two sounds do happen to be phonetically fairly close to each other (they are not identical), this identification tends to obscure the unity that holds between all the contextual variants of the phoneme /ɔ/ in French, some of which have more resemblance to English sounds other than the vowel of but (e.g. the vowel of English bought).

MAKING THE STUDENT CONSCIOUS

The phonemic divisions existing in the mother tongue - their number and their nature - are a major obstacle to the mastery of a new set of phonemic differences. A fundamental step towards the acquisition of a new set of speech habits is to sort out for the student the sound differences bound up with differences of meaning. Phonemic analysis is a useful and effective tool providing the procedure for establishing these differences, which, since they are valid only within the frame of a particular language, can only be determined through the analysis of that language.

DISTINCTIVE FEATURES

The various individual phonetic features described in the preceding phonetic section under headings such as: degree of opening, manner of articulation, place of articulation, etc., are not all on the same plane when they are considered from the point of view of the use that is made of them within the frame of a particular language. Phonetic features which underlie the difference between two phonemes - which serve to keep them apart - and whose modification alters the identity of the phoneme are called distinctive features.

Distinctive features are isolated by comparing with each other the phonemes of a language - and particularly. phonemes which have phonetic features in common. Thus, if we compare, in English, the phoneme /t/ with the phoneme /d/, we find that the phonetic feature distinguishing them is one of voicelessness versus voice (vibration of the vocal cords). If we compare /t/ with /k/ or /p/ or /č/, the phonetic feature distinguishing /t/ from these is its apico-alveolar position of articulation. If /t/ is compared with /n/ the phonetic feature maintaining them distinct is the difference between an oral consonant and a nasal consonant. If /t/ is compared with /θ/, the primary phonetic feature distinguishing them is the occlusive nature of /t/ and the fricative nature of /θ/. On the basis of all these comparisons the distinctive features defining the English phoneme /t/ are: voiceless, alveolar, oral stop. It is this combination of features which provides a specific and unambiguous definition of this phoneme. A feature like aspiration is not a distinctive feature in English; it cannot, by itself, serve to distinguish two phonemes; it is simply a characteristic feature of certain contextual variants of /t/. The fact that a phonetic feature is apparent does not make it automatically distinctive. /m/ generally occurs as a voiced sound, but as there is no voiceless /m/ in English or French phonemically distinct from a voiced /m/, neither voice nor voicelessness can be considered as distinctive for the French /m/ or for the English /m/.

Distinctive features in a language are generally fewer in number than the phonemes, since the same distinctive feature may be shared by more than one phoneme. Thus, in English, the phonemes /m/, /n/, /ŋ/ are all nasal; the phonemes /p/, /b/, /m/ all bilabial, etc. It is this sharing of features that makes it possible to establish the mutual relationships between the phonemes of a language on the basis of the number and kind of like and unlike distinctive features. With this introductory information understood, it is now possible to procede to the specific study of the pronunciation of a language.

The French and English Consonant System:

Unlike the French (F) vowel system discussed below, the system of F consonant phonemes is characterized by a general homogeneity. The number and nature of the consonant phonemes may be considered, for all practical purposes, to be about the same for all speakers of the language.

The F consonant system may be presented as follows:

p	f	t	s	š		k	
b	v	d	z	ž		g	
m		n			ñ		
		l			j		ŗ

The English (E) consonant system may be shown schematically as follows:

p		t		č	k	
b		d		ǰ	g	
	f	θ	s	š		h
	v	ð	z	ž		
m		n			ŋ	
		r				
		l				

to which j and w should be added.

Compared with the system of E consonant phonemes, the F system contains a smaller number of units: 18 against 24 for English. Although we find in both languages consonants of the same general types: stops and fricatives, voiced and unvoiced, oral and nasal, labials, dentals, etc., English contains consonants which do not exist in French.

Basing ourselves on the comparison of the two charts above we find that the E phonemes noted θ, ð, č, ǰ, ŋ, h have no counterpart in French. On the other hand, ñ is the only symbol occurring in the French list which does not also figure on the E chart.

PHONETIC RESEMBLANCE ONLY PARTIAL

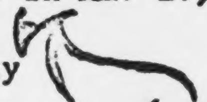
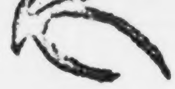
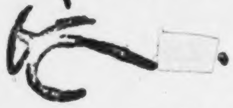
It would be an error, however, to consider that it is a simple matter for native speakers of E to acquire a native-like command of F consonants. In reality, the identity of symbols and of phonetic nomenclature covers only a partial phonetic resemblance, and if in some cases the transfer of phonetic features from English into French may pass more or less unnoticed, in other cases, such transfer produces the effect of a foreign accent , as when F words like pot, tout, quai are pronounced with E/p, t, k; respectively. A more extreme example is that of the substitution of /r/ for /r/; the transfer here may result in complete unintelligibility, since these two sounds are articulatorily and acoustically quite different.

PHONETIC DIFFERENCES BETWEEN F. & E. CONSONANTS

To elucidate the problem of obtaining native consonant sounds in F it is necessary to regard the various phonetic features which enter into the makeup of the various phonemes of French on the one hand and into their E counterparts on the other and to consider in what manner these are alike or different.

The articulatory positions of F consonants are clearcut and the movements smart; according to many commentators, the F articulations are briefer than those of E, and the simultaneously occurring phonetic features, making up the sound tend to be truly simultaneous, whereas in E, the onset or end of a given feature does not always coincide with the start or end of the sound.

PLACE OF ARTICULATION

As the inventory of F phonemes given above shows, F has six different positions of articulation which characterize at least two or more phonemes (seven if we consider j and ñ as forming such a class). Three positions are those of stops p, t, k and three of fricatives f, s, š. F has no fricatives whose place of articulation corresponds exactly to that of a stop, whereas in English such correspondences do exist (t-θ, d-ð, č-š, ǰ-ž). Certain positions of articulation may seem rather similar in both languages: e.g. bilabial, labiodental, hissing, hushing, ~~xxxxxx~~ velar. One mode of articulation, however, the apical, is more noticeably different. In E the tip of the tongue touches or approaches the gum ~~dix~~ ridge above the teeth whereas in F the tip or the blade of the tongue is against the upper teeth. The greater raising of the tip of the tongue in E produces in such E articulation(frequent in Am. E.) a cupping effect, the tongue shape being approximately  whereas in F the mass of the tongue is not depressed:  or . This difference of place of articulation never results in incomprehensibility but does affect noticeably the quality of the sound produced so that the use of E alveolar consonants instead of F dentals does not sound native to F ears. The prepalatal localization of j and ñ are discussed in the paragraphs dealing with these and the uvular feature of F/r/ discussed in the description of this phoneme.

MANNER OF ARTICULATION

Both F and E have stops and fricatives. ~~Mmmmmx~~ Phonologically, there is no reason in French to distinguish between stops and fricatives and consider the features stop and fricative distinctive, since they never serve by themselves to distinguish two consonant phonemes; for as stated above, the position of articulation is always noticeably different.

Difficulty is caused less by the differences in the place and mode of local articulations than by the differences in the nature of such features as distinguish one type of stop from another and sometimes also different types of fricatives.

Among those features the most important are the pair voice-absence of voice which in French keeps apart three pairs of stops: p-b, t-d, k-g and three pairs of fricatives: f-v, s-z, š-ž; voice normally appears, as a non-distinctive feature, in articulation of the remaining phonemes, which however may be made voiceless by their phonetic surroundings without losing their identity. The distinction between voice and its absence exists in English too, but not quite in the same conditions and with the same results as in F. In many contexts and notably before a vowel, which is a voiced sound, the voicing of E voiced consonants may commence only after the consonant articulation has begun (E be) and after a vowel it may cease before the end of the consonant (E add). In French the voicing feature begins with the onset of the consonant and lasts throughout its entire duration; it is completely voiced, whereas phoneticians inform us that this is generally the case in English only when the consonant occurs between two vowels.

Voice is often accompanied by articulatory weakness and voicelessness by more energetic articulation. This is normal in French, and certain specialists regard this distinction between strong and weak as more fundamental than that between voice and voicelessness; they argue that, as we shall see later, the voice or voiceless feature of a consonant may disappear under the influence of the voiced or voiceless character of a neighboring consonant in the utterance, whereas the difference between strong and weak does not disappear, at least not in slow careful speech. However, it is important to note that only such distinctions as are performed with the help of voice are universal among French speakers.

F has 6 stops grouped into 3 pairs, each member of a pair being distinguished by the feature voiceless-voiced. The place of articulation of the groups are bilabial, apico-dental, velar.

The production of F voiceless stops difficult for E speakers, who tend to introduce features present in E but absent in F. The most objectional of these is that of aspiration. E/p t k/ are aspirated when they occur before a vowel and particularly in word-initial position. Upon the release of a stop of this kind, a breath, an [h] like sound is heard before the beginning of the following vowel. The breath is an automatic, mechanical accompaniment of the E voiceless stops and the E speaker must learn to dissociate this feature from the voiceless stop if he wishes to obtain a French-like voiceless stop. According to the phoneticians who have studied the problem, the difference is one of coordination; for the production of non-aspirate F stops, the vocal cords are drawn together and ready to vibrate immediately upon the release of the consonant for the onset of the following vowel, whereas for aspirated E stops the glottis remains open for a short period after the release of the consonant, and it is this air which produces the aspirated effect.

The use of aspirated voiceless stops in F is considered a very evident characteristic of English or American accent. It sounds very unpleasant in French and may even expose one to ridicule. E speakers are quite used to articulating non-aspirated voiceless stops after /s/ as in skin, steel, spill, but the transposition of these contextual variants to other positions may prove somewhat difficult for many learners.

The Voiced Stops: /b d g/.

The F voiced stops are pronounced with voice and with less energy than their voicless counterparts. F voiced stops differ from E voiced stops in two major respects: F stops are fully voiced. The voicing is present throughout the entire duration of the stop. The vocal cords begin to vibrate at the beginning of the implosion and continue to the end of the sound. In E the implosion is often voiceless, the voice being introduced only after the beginning of the consonant articulation. Such stops are only partially voiced. In some contexts, there are many E speakers who do not voice these stops at all when they occur finally, and pronounce a voiceless weak stop. The use of partially voiced products generally results only in a foreign accent, but the use of completely unvoiced stops in contexts where F does not unvoice its voiced stops may give rise to a confusion between pairs of consonants distinguished solely by the feature voice-voicelessness.

Another difficulty that is both articulatory and contextual is found in the case of word final stops. In E, final stops are often not released, as in words like *tap*, *lad*, *sick*. In F on the contrary, all final stops are released; a slight breath, not as strong or as prolonged as a central vowel [ə], due to the release of the air enclosed in the mouth, is heard; this breath is voiceless for voiceless consonants and voiced for voiced consonants. Unreleased or imploded final stops are not clearly perceived by F speakers, and the carrying over of this E speech habit into F may cause difficulties of comprehension: a final consonant so pronounced within the frame of F runs the risk of not being "heard". On the other hand, care should be taken not to pronounce a full-fledged [ə], which may tend to give a southern (méridional) flavor to the pronunciation or simply sound incorrect.

THE CONSONANT PHONEMES

The voiceless stops: p t k

F/p/ The phonemic identity of French /p/ is shown by the following comparisons: bilabial with respect to /f/: *pile*/*file*,*épilé*/*effilé*, *étouffe*/*étoupe*; oral with respect to /m/: *pu*/*mû*, *chapeau*/*chameau*, *cape*/*came*;voiceless with respect to /b/: *pot*/*beau*, *capot*/*cabot*, *trompe*/*trombe*.

The consonant requires few particular remarks other than those already furnished above in the discussion of general consonant features. It may be noted here that the labial activity involved in producing this sound is more pronounced and energetic in F than in E.

F/t/ The F phoneme /t/ is defined by the following comparisons: dental with respect to /p/, /f/, /s/: taux/pot, tôt/faux, tôt/sot; oral with respect to /n/: tu/nu, mité/miné, botte/bonne, voiceless with respect to /d/: tôt/dos, rateau/ radeau, motte/ mode.

Like all F stops, /t/ is not aspirated. Its tongue position is dental and not alveolar like that of E/t/. The dental articulation may be obtained in two different ways. The tip of the tongue may be placed in contact with the upper teeth, or else a part of the blade of the tongue behind the tip is in contact with the upper teeth with the tip held behind the lower teeth. E alveolar [t] sounds quite "foreign" when transferred into F.

There are numerous American English speakers who pronounce, in intervocalic position, a flapped t (e.g. in words like latter, letter, better, sitting. This variant of E/t/ is to be proscribed completely in F, where such a sound is perceived as a sort of rolled [r] and is identified with the F/r/ rather than with F/t/. This fault may generally be avoided by marking clearly, as one should in Exx French, the syllable boundary (a-ta) and pronouncing intervocalic /t/ as part of the same syllable as the following vowel.

F/k/ This phoneme is defined by the following comparisons: velar with respect to /p/ and /t/: car/par/tare; voiceless with respect to /g/: quête/guette, quai/gai, arquer/arguer, bac/bague.

The various general remarks given above concerning the formation of F stops, and voiceless stops in particular, apply to /k/. For practical purposes, the place or articulation of E/k/ and F/k/ may be considered to be about the same. If the F front vowels are pronounced correctly with somewhat more front tongue position than the corresponding E sounds, and the F back vowels are likewise pronounced correctly, it is most probable that the tongue position for pronouncing this consonant will be quite naturally in accord with the habits of native F speakers.

F /b/ The phonemic identity of F /b/ is shown by the following comparisons: voiced with respect to /p/: (see F /p/); oral with respect to /m/: beau/mot, robe/rhum, gober/gommer; bilabial with respect to /v/: beau/veau, bague/vague, débit/dévie, habit/avis, glèbe/glaive.

Other than the remarks concerning stops in general and voiced stops in particular, F /b/ requires no particular commentary other than to reiterate the greater activity of the lips in articulating F bilabial sounds.

F /d/ The phonemic identity of F /d/ is indicated by the following comparisons: voiced with respect to /t/: (see F /t/); dental with respect to /v/: do/veau, dédier/dévier, rade/rave; and/z/: début/zébu, aidé/aisé, rade/rase; oral with respect to /n/: don/non, cadeau/canot, raide/reine.

The place of articulation of F /d/ like that of F /t/, is dental and not alveolar as in E. The remarks concerning the place of articulation of /t/ apply also to /d/, and likewise those concerning stops in general and voiceless stops in particular.

Also, the flapped /d/ used in intervocalic position by many American E speakers in words like *ladder*, *reading*, *haddock*, etc., has no existence in F and should be scrupulously avoided/ (see F /t/).

F /g/ The phonemic identity of F/g/ is shown by the following comparisons; velar with respect to /ž/: *gueux*/*jeu*, *cagot*/*cageot*, *orgue*/*orge*; oral with respect to /ñ/: *digue*/*digne*, *bagarre*/*bagnard*; voiced with respect to /k/: (see F /k/).

This phoneme is the voiced partner of /k/, and the remarks concerning the position of articulation of this latter phoneme apply to /g/.

The Fricatives:

F has six fricative phonemes grouped into three pairs of terms distinguished by the features voiceless/voiced. The positions of articulation of the three groups are labio-dental, hissing, hushing respectively. These do not coincide with any of the stop positions of articulation. As for the stops, the feature of voice coincides with the beginning and end of the fricative sound.

labio-dental	hissing	hushing
f	s	š
v	z	ž

F /f/ The phonemic identity of F/f/ is shown by the following comparisons: labiodental and fricative with respect to /p/: pot/faux, serf/s^rpe, [illegible, p. 10 at bottom] défi/dépit, chiffre/Chypre; and /t/: faux/tôt, biffe/bitte, effet/etai; oral with respect to /m/ and /n/: faux/mot/nos, chef/chêne, chauffe/chaume, chauffer/chômer; voiceless with respect to /v/: faux/veau, défier/dévier, chauffe/chauve.

F/f/ and E/f/ are quite close to each other phonetically and raise no particular problems. F/f/, however, is somewhat more energetic, made with tenser organs than for the E sound.

F /v/ The phonemic identity of F/v/ is shown by the following comparisons: labiodental with respect to /b/: (see F /b/) and /d/: (see F/d/); oral with respect to /m/ and /n/: veau/mot/nos, chauve/chaume; voiced with respect to /f/: (see F/f/).

This phoneme is the voiced counterpart of /f/. It is, like all F consonants, fully voiced (see above); E speakers must make an effort to voice this sound more than they do their E/v/. It is also more energetic than E/v/.

F /s/ The phonemic identity of F /s/ is shown by following comparisons: hissing (and fricative) with respect to /t/: son/ton, bosse/botte, masser/mater; and /š/: seau/chaud, casser/cacher, cesse/sèche;

and /f/: *casser/café*, *sot/faux*, *graisse/greffe*; oral with respect to /n/: *son/non*, *scie/nie*, *laisse/laine*, *place/planer*; voiceless with respect to /z/: *selle/zèle*, *baisser/ baiser*, *casne/case*.

French /s/ has as its upper articulator the teeth ridge (alveolae) as with E/s/. In F, the constriction is generally made with blade of the tongue with the tip held down behind the lower teeth. In English, the tip is often placed somewhat higher, but the difference between the F and E s-sounds is never very great.

F /z/ The phonemic identity of this phoneme is shown by the following comparisons: hissing with respect to /š/: *zoo/Jo*, *zèle/gèle*, *rase/rage*, *lésé/léger*; and /d/: *zoo/dos*, *rase/rade*, *aisé/aidé*; and /v/: *zoo/veau*, *rase/rave*, *baser/baver*; oral with respect to /n/: *zoo/nos*, *caser/caner*, *chaise/chêne*; voiced with respect to /s/: (see F/s/).

This phoneme is the voiced counterpart of /s/. The place of articulation of F /z/ is the same as that of F /s/, and the differences that may exist between E /s/ and F /s/ with respect to this feature also apply to F /z/. F /z/ is generally pronounced with more energetic voicing than E /z/ and is fully voiced (i.e. during the entire emission of the sound). Partially unvoiced /z/ as occurs often in many kinds of E speech in final position in words like E *goes*, *rose*, *sees*, is often interpreted by a F hearer as his phoneme /s/, and not /z/.

F /š/ The phonemic identity of this phoneme is shown by the following comparisons: hushing with respect to /s/: (see F /s/); oral with respect to /ñ/: roche/rogne, pêcher/peigner; voiceless with respect to /ž/: chou/joue, cachot/cageot, bêche/beige, cache/cage.

The phonetic characteristics of this phoneme are described in the phonetic section (p. 00). For practical purposes, the acoustical difference between the F and E sounds is not very great. The F sound is more energetic. From the point of view of its articulation, F/š/ is often made with lowered tongue tip (like F/s/) and with tenser buccal organs. At the same time, the lips are more protruded for the F sound than they usually are for the production of the E sound. Many E speakers pronounce the E/š/ with little, very lax or no protrusion. If this is somewhat different from the usual French lip position for this sound, it does not alter at all the identification of this sound.

F /ž/ The phonemic identity of this phoneme is shown by the following comparisons: hushing with reppect to /z/: (see /z/); oral with respect to /ñ/: page/pagne, beige/baigne, gager/gagner; voiced with respect to /š/: (see F /š/).

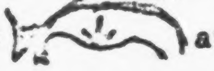
F/ž/ differs from /š/ by the feature of voice. English possesses a phoneme /ž/ having very similar phonetic characteristics. However, the E sound occurs within words; it is not usual initially or finally: pleasure, measure, seizure, leisure, occasion. In F, this phoneme occurs in all positions:

jour /žur/, bouger /buže/, sage /saž/. Initially and finally, many E speakers may be tempted to replace F /ž/ by their affricate phoneme /ǰ/, the initial and final sounds of the word E judge /ǰəǰ/ and a phoneme which occurs frequently initially and finally: E jazz, gem, hedge, rage. This substitution, [ǰ] for [ž] is a definite error of pronunciation. Likewise, care must be taken to voice F /ž/ fully in order to avoid confusion between F /ž/ and F /š/, a phonemic difference having very great frequency in French.

The F phonemes /l/ and /r/ stand apart from the other consonant phonemes of language. F /l/ is the only lateral phoneme of the language and F /r/ is the only phoneme that occurs with a uvular place of articulation or as a vibrant. F/l/ and E/l/, F/r/ and E/r/ are not articulated at all in same way and sound very different. Along with the F voiceless consonants, the pronunciation of F /r/ and F /l/ is one of the obvious touchstones of American or English accent in French.

F /l/ The phonetic identity of this phoneme may be shown by the following comparisons: lateral with respect to all other phonemes of F: lot/tôt, hâlé/hâté, selle/sept, lot/rot, plie/prie, aile/air, sable/sabre, moulez/mourez.

Both F /l/ and E /l/ have lateral articulation (see p. 00). However, other phonetic features they possess are quite different, so much so that the substitution of E /l/ in certain contexts for F /l/ may result not only in a foreign accent, but also even in obscuring the identity of the F phoneme.

The lateral feature left aside, the tongue position of F /l/ is parallel to that of F /t/ and F /d/, that is, it is dental. The tip of the tongue or the blade articulates against the upper teeth or the gum ridge just above. In American speech generally, E /l/ is made with a tongue position parallel to that of E /t/ and E /d/. It tends thus to be an alveolar sound. This raising of the tip of the tongue is accompanied by a depression - a cupping - of the surface of the tongue behind the tip  and it is this latter feature which is responsible for the particular characteristics of E /l/. This tongue position resembles roughly that of the vowel [u], and E [l] does very often have a resonance evoking this vowel. In fact, many F speakers, ignorant of English, often interpret such an E /l/ as [w] or [u] or [o]. For F /l/ the front surface of the tongue is not cupped; it tends to remain flat, and generally the tongue is pushed further forward than for E /l/.

F /l/ may occur voiced or voiceless without losing its identity. In most contexts it is pronounced with voice. However, when F /l/ occurs finally following a consonant, it tends to be pronounced voiceless: peuple /pøpl̥/, spectacle /spektakl̥/, buffle /bufl̥/. (It may be noted, however, that within a word group when the group voiceless consonant + l is followed by a vowel, the /l/ remains voiced: le peuple américain /ləpøplamarikẽ/.)

In English words of the type stop or fricative consonant + l - table, simple, article, spectacle, etc. - E /l/ is a syllabic sound /teib-l/ or /teibəl/, etc. In F in this context, /l/ is released rather in the manner of stops, and has definitely non-syllabic, consonantal characteristics. The F equivalents of the English words table, simple, etc. are all monosyllabic words. However, if the consonant group causes difficulty, it would not be really wrong to pronounce such words in two syllables /ta-blə̥/ but without insisting too much on the [ə] release.

In familiar or rapid speech, word-final /l/ followed by a word beginning with a consonant is often only slightly audible, and may even be completely inaudible, that is, dropped: possible/posible/ [posiblə ?] or /posib/, etc. Until considerable fluency is obtained in French, this is something to know about rather than to practice. Not all F speakers do this and many only pronounce a limited number of frequent words in this way.

Some F speakers tend to replace /lj/ by /j/: thus, soulier becomes /suje/ instead of /sulje/, escalier /eskaje/ instead of /eskalje/. This should be avoided, as other F speakers resent it. In the group /ilj/ as in million, milieu, the reductions of /lj/ to /j/ (/mijõ/ /mijø/ is less offensive.

When referring to the pronunciation of present-day standard French, the term "l mouillé" is meaningless. French has a phoneme /l/ and a phoneme /j/, but no phoneme that may be labelled "l mouillé". This term is justified only by a reference to spellings like -il, -ille (oeil, bouteille), which were used to note a palatal lateral phoneme which has since disappeared completely from the standard language.

F /r/ The phonemic identity of this phoneme is shown by the following comparisons: r/l : (see /l/).

Although, for the sake of convenience, the same symbol r is often employed to note a phoneme of English and one of French, the differance between these is very great, so great that they have hardly any phonetic features in common.

The tongue position in Am. *E* /r/ has affinities with that of t, d, s, z. The tongue is cupped and may even be curled back (retroflex) with the tip raised toward the hind part of the alveolar region or the front part of the hard palate. Other speakers may raise the blade of the tongue and hold the tip down. The constriction of this sound is intermediate between that of fricatives and that of high vowels. The air stream passing through produces little or no friction. The sound is made with the lips more or less protruded.

None of these articulatory features are pertinent to the production of standard F /r/. Here the place of articulation is uvular, that is, has as the upper articulator the uvula and as the lower articulator the back of the tongue. This place of articulation may serve to produce 1) a relatively weak uvular fricative [ʁ] or 2) a uvular vibrant { R]. It is not easy nor particularly important to distinguish in speech between the two since they represent in French variants of the same phoneme, variants which are contextually conditioned for some speakers and for others reflect individual pronunciation. The French phoneticians call this kind of [r]-sound "r grasseyé".

The uvular fricative differs from the uvular vibrant by the fact that for the former, there is a simple narrowing of the buccal air passage in the uvular region, while for the uvular vibrant, the uvula is made to vibrate several times against the median line of the back of the tongue. The vibrant [R] is more energetic by nature than the fricative [ʁ], but it is not nearly as energetic as gargling, which is produced in a rather similar manner. The essential feature for F /r/ is the uvular place of articulation which is alien to E. The place of articulation is further back than for E /k/. Gargling may serve as a starting point for learning the vibrant sound. Or else, starting from the vowel sound [a] (as in father), the tongue may be retracted until the constriction becomes such as to produce a slight friction. Lip protrusion plays no particular rôle in the production of [R] and [ʁ].

Like F /l/, F /r/ usually occurs voiced, but when in contact with a voiceless consonant and non-final, it may be partly unvoiced: *parti*, *triste*, *trait*, *accru*, *arc*, *serpent*; in final position after a voiceless consonant F /r/ may be completely voiceless: *lettre*, *autre*, *âpre*, *sucre*, *sacre*, *lèpre*, *souffre*, etc. As the voiced-voiceless features play no particular rôle in the identity of F /r/ (cf. /p-b/), /r/ tends to assume more easily than the stops and fricatives the voiced or voiceless character of a contiguous consonant. Within a word group, before a vowel, a word-final /r/ is not fully unvoiced: un autre avis /ẽnotravi/; it is treated as non-final.

Like F /l/, F /r/ is never syllabic, as E /r/ may sometimes be: E center /sent-r/ or /sentər/ (for E speakers who pronounce final r). In F the corresponding word centre is pronounced /sãtr/ in one syllable or else /sã-trə/ with an audible but short release after the [r]. Before a following word beginning with a vowel the group consonant + r is linked to this vowel without any kind of intervening release or [ə] being heard: quatre amis /katrami/, but quatre femmes /katrəfam/.

In familiar and rapid speech some speakers drop the final r-sound in some very frequent words when it is preceded by a consonant (see /l/) and followed by a word beginning with a consonant: l'autre jour /lotrəžur/ or /lotžur, quatre francs /katrəfrã/ or /katfrã/. It is certainly more elegant, and imperative in slow speech, to pronounce the form with /r/.

Phonetically the difference between E /r/ and F /r/ is so great that actually the only true relationship that may be established between them is a historical one; in words of common origin, the two correspond to each other: E rat - F rat, E grain - F grain, E arrive - F arriver. E /r/ is generally interpreted by a French-speaker ignorant of E as anything — [ž], [l] or [w], —but F /r/.

Certain English dialects have r-less contexts, /r/ never occurring in syllable final position. Thus, some E speakers pronounce the word sort as [sort], others pronounce it [soət] or with a long vowel. In word final position this is very frequent: E poor is pronounced [pur] or [puə̯]. In F there is properly speaking no r-less context, and these E language habits must not be carried over into F. Here are some pairs for training:

F	*paire*	*porche*	*Sorbonne*	*garde*	
E	*pair*	*porch*	*Sorbonne*	*guard*	

F	*force*	*parc*	*sûr*	*tarte*	*air*	*arm*
E	*force*	*park*	*sure*	*tart*	*air*	*arme*

There is another kind of r-sound, a tongue-tip trilled r, produced by the vibration of the tongue against the alveolae, which is used by certain members of the F language community. But it is not at all characteristic of Parisian pronunciation, and marks the speaker's French as regional. It is losing ground to the uvular r. However, the rolled r is used in singing and for certain kinds of elocution. This variant of the /r/ phoneme should not be taught except when all attempts to obtain a uvular [R] or [ʁ] have proved impossible. This kind of r-sound is found in some kinds of dialectal English; it is considered characteristic of a Scotch accent or Irish brogue. Actually, the closest phonetic equivalent found in Am.E. to this rolled r is the flapped dental [t] and [d] often used in words like *letter* and *ladder*.

The nasal consonants:

French has a bilabial nasal phoneme /m/, and a dental nasal phoneme /n/. A phonemic analysis of some F speakers shows that they use a third nasal phoneme /ñ/ as in *gagné* /gañe/ which remains distinct from the group /nj/ in *panier* /panje/. When confused, /ñ/ and /nj/ sound [ñ], never [nj].

F /m/ The phonemic identity of F/m/ is shown by the following comparisons: nasal with respect to /p/ and to /b/: (see /p/ and /b/); labial with respect to /n/: *mon*/*non*, *sommer*/*sonner*, *ame*/*âne*; (labial with respect to /ñ/: *lime*/*ligne*, *hameau*/*agneau*).

The articulatory characteristics of F/m/ and E/m/ are similar. There are, however, a number of differences concerning their use in context. F/m/ normally occurs fully voiced, but when in contact with a voiceless consonant, a voiceless variant of this phoneme may appear. Some words have two pronunciations: the suffix *-isme* (*socialisme*, *journalisme*, etc.) may have one of two pronunciations: [ism] or [izm] likewise the word *spasme*, *prisme*; the former pronunciation is normal in Paris. F/m/ never occurs as a syllabic sound as the /m/ in the E words *bottom*, *atom*, *chasm*; it is always released or arrested rather in the manner of a stop, when preceded by a consonant, and like a fricative when preceded by a vowel.

Like other phonetic features of F sounds, the feature of nasality coincides quite closely with the beginning and end of the nasal phoneme; it does not overlap and color in an audible manner a preceding or a following oral vowel as often happens in English in words like *meat*, *seem*, etc. In F, where the difference between nasal and oral vowels may serve to distinguish words, speakers do not spread nasality where it does not belong.

F /n/ The phonemic identity of F/n/ is shown by the following comparisons: nasal with respect to /t/ and /d/: (see /t/ and /d/); dental with respect to /m/: (see /m/); (dental with respect to /ñ/:*dîne*/*digne*, *peinez*/*peignez*).

The nasal dental F/n/ has the same tongue position as F/t/ and F/d/. Like these latter phonemes it differs from E/n/, whose tongue position is alveolar. The contextual variants of this phoneme are parallel to those of F/m/.

F /ñ/ The discussions concerning the existence or non-existence of this phoneme revolve about whether, in a given context, /ñ/ is distinct from the group /nj/: actually, some speakers distinguish in their speech, for example, between *peignez* and *peiniez*: others do not and pronounce both [peñe]. In any case, the sound [ñ] is of frequent occurrence.

The phonemic identity of this phoneme (with the restrictions mentioned) is shown by the following comparisons: palatal with respect to /m/ and /n/: (see /m/ and /n/); nasal with respect to /j/: *pagne*/*paille*.

The place of articulation of this phoneme does not correspond to that of any stop of F; it approximates that of

F/j/, that is, a palatal sound made with the front of the tongue and the hard palate as articulators. Examples of words which may be considered to contain the sound [ñ] in F: *digne*, *compagnie*, *pagne*, *daigner*, (*vous*) *feignez*, *chignon*, *oignon*, *gagner*, *hargne*, *Charlemagne*, *guigne*, *répugner*, *Agnes*

This sound is alien to English. The group [nj] found in E words like *onion*, *canyon* is actually a cluster in which the [n] does not have the palatal characteristics of F/ñ/. On the other hand, E/ŋ/ as in E *king*, *sing*, is a velar nasal whose place of articulation is further back (back of tongue and soft palate) than for /ñ/. A final [ŋ] sound is sometimes used by F speakers who know some English, in words like *camping*, *parking*, etc.; other F speakers pronounce either [iŋg] or [iñ].

The spelling *gn* is usually employed to note the phoneme /ñ/; a few frequent words, which have this spelling but have the pronunciation /gn/, are: *stagner*, *ignifuger*, *Agnus Dei*, *incognito*, *diagnostic*, etc.

MUTE E

The inherent phonetic characteristics of the so-called mute *e* (also labelled variously *e* muet, *e* caduc, *e* féminin, schwa) will be discussed in the chapter dealing with the vowel phonemes. However, its behavior within the spoken chain sets it apart from the other vowel phonemes of the language, if indeed it is to be classed among the phonemes. At the same time it is a very characteristic feature of the French language. Strange as it may sound, its case should be dealt with in the chapter devoted to consonants.

Mute *e* is characterized by the fact that usually its presence and its absence are either contextually conditioned or optional. When its appearance is contextually conditioned, it is the number and type of the surrounding phonemes which are the pertinent factor. In other cases where it is optional the speaker has a choice which may depend upon the individual, dialectal, or stylistic factors. The appearance or the supression of a mute *e* does not in any way alter the identity of a word; in this respect it is quite different from the vowel phonemes. However, there are words in which it never occurs and in which it cannot be inserted: the word *atteler* is normally /atle/ in Paris, but /atəle/ is heard in certain circumstances; *atlas* on the contrary is only pronounced /atlas/. As in this example, the French orthography generally indicates where a mute *e* may or may not occur.

The phonemic status of mute *e* is not easy to establish. Mute *e* has been described as a lubricating element, which serves to break up groups of consonants, generally three or more.

This is shown by such pronunciations as [ursəblã] for *ours blanc*, [arkəbutã] for *arcboutant*, [karləmarks] for *Karl Marx* where [ə] is inserted within consonant groups where it has no traditional or orthographical justifications. Even educated people may be heard to use these. This lubricating function would probably be the sole function of mute *e* if French people did not go to schools where they learn to spell differently words like *coq* and *coque*, which they pronounce alike. Besides, they are taught poetical diction where every mute *e* is sounded except before the initial vowel of a following word. As a result, spelling is exerting an influence in this respect so that people are tempted to consider as incorrect those pronunciations of mute *e* that are not supported by the spelling. Furthermore, some mute *e*'s used as lubrifcating elements in some contexts are transferred to other contexts where they are not needed: it is normal that the first *e* of *belette* be sounded after the indefinite article *une* /yn/ since otherwise a [nbl] cluster would result; but the pronunciation [bəlet], normal in [ynbəlet], is transferred to *la belette* [labəlet] where it is not phonetically justified. This explains why it is possible to find pairs of words like *la belette*/*la blette* (a kind of beet) where the distinction between the two words may be and actually is frequently secured by the pronunciation [labəlet] for the former as opposed to [lablet] for the latter. In other cases, its appearance is definitely of an intermittent nature, but here again it may assure the difference between words which would otherwise be pronounced exactly the same: (*vous*) *monterez*/mõtəre/ or /mõtre/ - *montrez*/mõtre/ (sole form possible).

The major attempt to codify the situation concerning the mute *e* is referred to in books on phonetics as "la loi des trois consonnes" or "la loi de Grammont" after the French phonetician who attempted the classification. As this so-called law is rather complicated, the discussion here shall be limited to a few empirical rules applicable to standard French.

The fundamental rule is that the mute *e* is represented by zero (i.e. is dropped) in Parisian French except when it is preceded by two consonants (or more) where it is preserved. Examples of mute *e* dropped after a single consonant are numerous: *acheter* [ašte], *appeler* [aple], *cimetière* [simtjer], *moucheron* [mušrõ], *dangereux* [dãžrø], *poterie* [potri], *pas de chapeau* /padšapo/, *ça se fait* /sasfe/, *je l'ignore* /žliñor/, *tout le monde* /tulmõd/, *grande splendeur* /grãdsplãdør/, etc.

Examples of [ə] kept after two or more consonants: *appartement*, *gouvernement*, *calmement*, *parlement*, *exactement*, *justement*, *mercredi*; *elle me connait* [elməkone], *au bord de l'eau* [obordəlo], *crever* [kr^{ə}ve], *prenons* [prənõ].

When the first syllable of the utterance has a mute *e*, it is safe to pronounce it: *je me dépêche* [žəmdepeš], but *si je me dépeche* [sižmədepeš]; still [žmədepeš] and [sižəm depeš] are perfectly acceptable. Euphony certainly plays a role here: *je te dis* is preferable [žtədi] so as to avoid the clumsy [td] cluster. A proper name like *Geneviève*, which is often used utterance initially, is practically always [žənviev]. Generally speaking, pronouncing mute *e* is recommended in the first syllable of words like *belette*, *pesé*, *repos*, even if preceded by a vowel, as in *la belette*, *c'est pesé*, *en repos*, although pronunciations without mute *e* are often heard.

Within utterances, when two successive mute *e*'s are surrounded by single consonants, the former is normally dropped and the latter preserved: *tu me le dis* [tymlədi], *on le demande* [õldəmãd]. Of three successive mute *e*'s in the same type of context, only the second one is preserved: *on me le demande* [õmlədmãd]. Note however that other pronunciations such as {õlədmãd], [õməldəmãd], [õmələdmãd] are often heard and are equally acceptable. The spelling is ambiguous in a number of words, like *papeterie*, *seneçon* where the first *e* should be sounded as if it were written *è*. Word final mute *e* is normally dropped: *plume*, *j'aime*, *rose*, *litre*, *reste*, *algue*, *arbre*, *meurtre*, *texte*/tekst/etc. When mute *e* occurs word-finally after two consonants but the word occurs within a word group, [ə] may often either be kept or dropped; it is more often kept if followed by a consonant group: *une arme blanche* /ynarmblãš/ or /ynarməblãš/. When the word-final consonant group is consonant +/l/or +/r/ and the following word begins with a consonant, the mute *e* is generally kept: *table ronde*/tablərõd/. This same principle also applies usually between the end of a radical and a following suffix: *accordera*/akordəra/ or /akordra/.

When a mute *e* occurs in the syllable preceding the noun suffix -*ier* /je/, it is always pronounced: *atelier*, *chapelier*, *bachelier*, *hôtelier*, *Richelieu*. Likewise before the conditional endings of the verb: (*nous*) -*rions*, (*vous*) -*riez*: *donnerions* /donərjõ/; *parleriez* /parlərje/.

Before words that are said to begin with "h aspiré" (cf. 30.31) a final mute *e* of the word immediately preceding is pronounced: *cette hache* /setəaš/.

It should be kept in mind that in a large majority of cases dropping or preserving the mute *e* does not affect the identity of the word. Southern French speakers sound all the mute *e*'s of the spelling, and beginners could well be allowed to do the same except in word and utterance final positions. But as they advance, students should be urged to practice some slurring in accordance with the above indications.

Liaison

There are many French words which have two phonetic forms; a longer form and a shorter form. The longer form is characterized by the presence of a final consonant (/t/, /z/, /n/, most usually) which is absent in the shorter form. An approximate indication of this final consonant is furnished in the usual spelling of the word. Thus, the word *les* has two forms /le/ and /lez/, the first occurring before a following word beginning with a consonant, and the second before a word beginning with a vowel (except a number of words which are said to begin with "h aspiré", (see below)). For the shorter pre-consonantal form, the word limit coincides with the syllable limit: *les garçons* /le-garsõ/. For the longer form, the final consonant of the first word belongs phonetically to the first syllable of the second word: *les enfants* /le-zãfã/. The two words are thus linked together and constitute phonetically speaking a single word.

Liaison, or linking, as this phenomenon is called, takes place at a word boundary under certain specific grammatical (syntactical) and phonetic conditions. In certain cases, the use of the liaison form is obligatory, in other cases it is optional. The liaison form is obligatory in the following cases:

1) Within groups beginning with the noun phrase introducer and ending with the substantive (determiner - numeral - adjective - substantive): *mon‿amour* /mõnamur/, *ces‿enfants* /sezãfã/, *deux‿enfants* /døzãfã/, *quelques‿enfants* /kelkəzãfã/, *mes‿autres‿anciens‿amis*, *un* *grand‿arbre* /grãtarbr/, *de grands‿arbres* /grãzarbr/.

2) Within a group comprising the personal pronouns and *en*, *y* preposed to a verb and that verb: *nous‿avons*, *vous‿avez*, *ils‿ont*, *ils‿aiment*, *j'en‿achèterai*, *nous‿en* *avons*, *allez*-*vous‿-en*, *vous‿y* *arrivez*.

3) Between a verb form and a personal pronoun, *en* or *y*, when these follow the verb form: *vend-‿il*, *allez-‿y*, *souvenez-vous-‿en*.

Between certain adverbs and the word they modify: *très‿amoureux*, *trop‿aimable*, *plus‿habile*, *tout‿heureux*, *bien‿aventureux*, etc., but children and even educated speakers may be heard to skip some of these.

5) Within some prepositional phrases: *chez‿eux*, *en‿attendant*, *sous‿un lit*, *dans‿une semaine*; note however that linking is optional in, e.g., *chez Alfred*.

Linking does not occur:

1) Between a substantive and a following modifying adjective: *un enfant*/*heureux*, *un goût*/*amer*, *un roman*/*intéressant*. Linking is optional when the substantive and the adjective are plural: *les cigarettes americaines* [za-] or [-ta-].

2) Between a word belonging to the subject of a sentence and the following verb (except for the case of the pronouns already described): *l'enfant*/*aime les glaces*, *Mon fils Jean*/*est malade*.

3) Between parts of a proper name: *Jean*/*Amrouche*, *Jean*/*Eté*.

4) *Et* and *ou* do not enter into linking with a preceding word: *vous*/*et moi*; *vous*/*ou moi* and *et* does not link with a following word beginning with a vowel; *un livre et*/*un verre*.

5) With a word beginning with "h aspiré": *les/héros*, *ces/hautes fonctions.*

6) Between words not standing in close grammatical relation.

A construction with obligatory liaison in contexts where liaison does not ordinarily occur is usually a sign of a compound word: cf. *(j'ai mis) un pied/à terre* - *un pied à terre* /pietater/.

The optional liaisons are also numerous: e.g. *nous avons/eu* /-õ y-/ or *nous avons eu.* /-õzy-/ Their use depends a great deal upon style. The more formal the style, the more liaisons tend to be made.

ELISION

Elision is a phenomenon complementary to liaison. It is, like liaison, a kind of fusion or incorporation which takes place before a word beginning with a vowel. But here the first word, which ends in a vowel, has a shorter prevocalic form characterized by the dropping of this final vowel. The consonant thus made word final is pronounced as one syllable with the initial vowel of the following word: *le garçon* /lə-garsõ/ - *l'homme* /lom/. Only a small number of words have obligatory elided forms; the most common of these are *le*, *la* with *l'* /l/ as their prevocalic forms; *si* which becomes *s'* /s/ before *ils*: *s'il vient*.

H ASPIRÉ

The phenomenon generally know as "*h* aspiré" is also peculiar to French. It may be taken to represent the opposite of elision and liaison; it should not be identified with any specific sound and very difinitely not with E/h/ or a glottal stop. We have just seen that elision and liaisons are conditioned by vocalic initials. However, some words beginning with a vowel - even when all syntactic grammatical conditions are satisfied - do not permit the use of a liaison or an elision form; but require generally the same forms of variable words as are used before a consonant initial. It is in reference to words having a vowel initial but not allowing liaison or elisions that the term"*h* aspiré" is applied. Most of these are spelled with an initial *h*, but many words beginning with *h* do not belong here. The F words *être* and *hêtre* are pronounced in isolation exactly alike. However, when they occur in context, the forms of the accompanying variable words distinguish them: *l'être*/letr/ and *le hôtre* /lǝetr/, *un bel être* - *un beau hêtre*, *j'ai* /že/ - *je hais* /žǝe/. It takes many years for French children to handle "*h* aspiré" correctly: replacing /lezariko/ for *les haricots* by standard /leariko/ requires recurrent interventions on the part of cultured adults.

As a prohibition of liaison, "*h* aspiré" amounts to handling words with vocalic initial as if they began with a consonant. Some of these words do derive from words which down to the sixteenth contury actually began with the sound [h], but others never have had an initial [h] at any time of their recordable history, nor are necessarily written with h. Thus, cardinal numbers when used as ordinals are treated as if they had an initial "h aspiré": le un, "number one", le huit, le onze (but l'un "the one", dix-huit /diz-yit/); note le héros (but l'héroïne). The "h aspiré" serves to mark in a clear cut way the beginning of a word with a vowel initial; this may be important for its identification in a context; recently borrowed or unusual words, especially short ones, are treated in this way: le yacht /ləiak/ or /ləiot/, le Yankee /ləiãki/, (but l'iode /liod/). With some words there are two possibilities: l'ouate /luat/ or la ouate /lauat/.

Some more usual words, other than those already cited, beginning with "h aspiré", are the following: haïr, hâler, halle, halte, hameau, hamac, hanche, hareng, hanneton, hanter, haut, harceler, hardi, harpe, harpon, hasard, hâter, hausser, heurter, hibou, hisser, Hollande, homard, Hongrie, hoquet, honte, hors, houille, houle, houblon, hublot, huer, hurler, hutte, yaourt, yole.

The sound [h] does exist in French, but its use is expressive: Horrible! [horibl].

Consonant clusters.

Clusters of consonants are frequent in French. A cluster may occur within the frame of a single syllable; 1) before the vowel: place /pl/, crise /kr/, France /fr/, vrai /vr/, strie /str/, splendeur /spl/, psychologie /ps/, Tchèque /tš/, tsigane /ts/; 2) after the vowel: garde /rd/, parle /rl/, exact /kt/, table /bl/, spectre /ktr/, texte /kst/. As the examples illustrate, such cluster are composed generally of two, sometimes three consonants. Other clusters may be formed by consonants belonging to two different syllables. Here the groups are of greater variety: disgrâce /sgr/, abstenir /bst/, etc. Any consonant or consonants closing a syllable may find themselves in contact with any consonant or consonants beginning a syllable, subject to the restriction indicated in the discussion of mute e.

To these consonant cluster, which are of a permanent nature, may be added consonant clusters of an intermittent nature, formed by the dropping of a mute e: acheter /ašte/, un serin /ẽsrẽ/, tenir /tnir/, mener /mne/, etc. In such cases any combination can occur.

Most French consonant clusters have a counterpart in English, and even those that do not, present as a rule few difficulties of pronunciation. Note however, in words of Greek origin, such initial cluster as /ps/ in psychologie, /pn/ in pneumatique; in everyday spoken French pneu, short for *pneumatique*, is often handled as if it were written *peneu* with a mute *e*: /ẽpnø/ *un pneu*, but [katpənø] *quat(re) pneu*. French, like English, presents clusters of two identical consonants across word and morpheme boundaries: *une nièce* [ynnies] with [nn] as in *one needs* or *cleanness*, *là-dedans* /laddã/ as in *red deer*, *netteté* /nette/ as in *night-time*. These clusters are called geminates. French geminates appearing at word and morpheme boundaries are just as unavoidable as similar geminates in English: simplifying the geminate in *là-dedans* would make it /ladã/, i.e. *la dent*. Most, but not all of these involve some mute *e*; without mute *e*: *pour rien* /purriẽ/, *tous servis* /tusservi/, *quel livre* /kellivr/. The futures, *vous courrez*, *vous mourrez* /kurre/, /murre/, whose geminate distinguishes them from the present, *vous courez*, *vous mourez* /kure/, /mure/ do not present any mute *e*. But Parisian speakers handle the pair *vous courrez* - *vous courez* in the same way as *vous fourrerez* - *vous fourrez* /furre/ - /fure/. The distinction between *nous travaillons* /travajõ/ and *nous travaillions* /travajjõ/ and generally speaking, between /-jjõ/, /jje/ and /-jõ/, /-je/ is neglected by many speakers, who say /travajõ/ /-jõ/ and /-je/ in both cases.

Not all gemination has an obligatory character. It occurs in speech very frequently as a stylistic or individual variant of the simple consonant. There are many speakers who often pronounce geminate consonants where the spelling shows a double letter: e.g. words like *sonnet*, *addition*, *grammaire*, *illogique*, etc. All such words may be pronounced with a simple consonant. In expressive pronunciations of the first consonant of some adjectives as *épouvantable*, *impossible*, the result is not exactly a geminate but an energetically articulated and lengthened consonant.

Assimilation.

When sounds occur contiguous to each other in the spoken chain, the phonetic characteristics of one of the sounds may exert an influence upon the characteristics of the other sound, or sounds of the group. In this case phoneticians speak of assimilation. Assimilation is a mechanical automatic process, but it does not work the same way in all languages. This is true for the assimilation of the voiced and voiceless features of French. In French the most usual kind of consonant ~~xx~~ assimilation normally affects voice as opposed to voicelessness. When two consonants, one normally voiced, the other normally voiceless, are in contact in the spoken chain, both consonants tend to be pronounced either voiced or voiceless. Normally, it is the second consonant which imposes voice or voicelessness upon the entire group.

This assimilation of voice and voicelessness does not necessarily mean that a /b/ pronounced without voice becomes identical with a /p/, a /d/ with a /t/, or that a voiced /p/ becomes identical with /b/, etc. The voice and voicelessness are eked out by articulatory weakness and strength respectively: voiced sounds are normally weak and voiceless sounds normally strong. When assimilation, as described above, takes place, weakness and strength may not be affected and/ thus {still serve to} keep apart pairs of phonemes like /p/ and /b/, /f/ and /v/, normally distinguished by absence or presence of voice. In Paris at least, *acheter* is distinct from *à jeter*. When the speech tempo increases, it may become difficult to perceive the distinction between weak and strong. What is important however, is to know which consonant imposes its phonetic characteristic upon the other: *à jeter* pronounced exactly like *acheter*, with the consonant group unvoiced, is acceptable in French; pronounced with the two consonants voiced, it is not.

When the second consonant of the group is a nasal consonant, or /l/ or /r/ (phonemes which do not have voice or voicelessness as distinctive features), it is usually the first consonant of the group which imposes its voice or voiceless feature on the cluster: *peuple* /pøpl̥/ with a voiceless [l̥], *traître*/tretr̥/ with a voiceless [r̥].

These rules of assimilation apply also to clusters of consonants resulting from the dropping of a mute *e*: *naïve* - *naïveté* /naiyte/.

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The French Vowel System:

Preliminary Remarks:

Before undertaking the study proper of the French vowels and their comparison with those of English, there are several preliminary questions that must be first dealt with. The first of these concerns the vowels of English which will serve as the elements of comparison with the French vowels; and the second question concerns the varieties of French vowel systems.

The English Vowel System.

There exist many varieties of English, and these do not all have the same vowel system. The one presented here has been considered useful as a frame of reference.

If the substitution principle outlined in the section above dealing with phonemes is applied to the analysis of English words, it is possible to establish the inventory of the English vowel nuclei phonemically distinct from one another. The term nucleus rather than vowel phoneme is used preferably when referring to English, because the linguistic interpretation of the sound segments isolated raises many problems and is a matter of considerable controversy among linguists.

The English vowel nuclei are listed below, accompanied by a small sampling of key-words.

	Front-spread		Central		Back-rounded	
high	ii̯	beat, see			uu̯	boot, shoe
	i	bit			u	foot
	iə̯	bier			uə̯	poor
	ei̯	bait, say			ou̯	boat, so
mid	e	bet, merry	ə	but		
	eə̯	cairn, Mary, fair			oə̯	bought, bore, saw
	æ	bat, marry			oi̯	noise, boy
					au̯	bout, how
low	ai̯	bite, sigh	a	tot	aə̯	tart, bard, pa

This listing requires a certain number of comments.

In the above table, two kinds of nuclei are distinguished: the ones noted by a single symbol are short nuclei and those noted by two symbols are long nuclei. These are distributed into three classes: front-spread, central, and back-rounded. The long nuclei may be phonetically either diphthongs or long pure vowels: the duration of these are of the same order. In reality, there is no sharp dividing line between the two types. The diphthongal nature of the vowel of the word seat is less apparent than that of the same vowel nucleus when it occurs in final position as in the word sea. The low mid vowel nuclei eə̯ and oə̯ and the low vowel nucleus aə̯ (which represents the vowel sound of words like card as distinct from cod, tart as distinct from tot, in the speech of those who pronounce no [r] in card, tart, etc.) are often pronounced as long pure vowels, but they also may be heard as diphthongs characterized by a centering glide, as in words like: pair, paw, pa, respectively.

High diphthongs with centering glide iə̯ as in pier and uə̯ as in poor are to be found in the speech of those who use no final [r] in these words.

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Duration is not the only distinguishing element found among these nuclei. There exist also differences of degree of opening which some linguists consider to be a more fundamental criterion of classification than the distinction between long and short nuclei. The above chart also shows the relative degree of opening of the nuclei. Viewed from this angle, English distinguishes up to six degrees of opening (in the front-spread series), five in the back-rounded series.

In certain cases, a short nucleus may be paired with a long nucleus, thus, i and ii, u and uu. The differences between the terms of these pairs are complex: besides a difference of degree of opening - the long nucleus tends to be higher - there is also a difference of tongue position - the short nuclei tend to have a position of articulation that is more central than that of the long nuclei, which if they start from the position of the short nucleus, tend towards less central position. Their difference is often considered to be between a lax and a tense vowel. (see phonetic section: tense/lax).

With respect to their use in making up words, the nuclei listed occur in both checked and in free syllables, which are not completely unstressed, with one major exception however: short nuclei do not generally occur in final free syllables having some kind of stress; thus, *sit* and *seat* but only *sea*; *mate* and *met* but only *may*.

In completely unstressed syllables, the number of possible nuclei is severely limited. For some speakers, it is limited to a single vowel - a laxly articulated vowel of the mid central type ə, as the final sound of the words *villa*, *sofa*, *china*.

The Varieties of French vowel systems.

The second preliminary question concerns the source of the French pronunciation intended to serve as the basis for teaching foreign students. In school, native French speakers are taught the grammar of written literary French, with emphasis on the cases where this kind of French deviates from the normal spoken usage. Pronunciation, as such, is rarely a matter of discussion, and is generally limited to the relationships between sound and spelling. The reason for this neglect of pronunciation is that in France, it is elegance of style and grammatical correctness, particularly in writing that are generally taken as the primary criterion for identifying a cultured person. The acquisition of these qualities requires a rather long apprenticeship and considerable application. Yet, there do exist varieties of pronunciation, and a choice must be made among them, for they are not all of equal status. This choice does not immediately concern the student, but it is of interest to the teacher who must be able to separate out what is admissible and what is not, and generally to evaluate the pronunciation he obtains from his student or from a native informant.

If the question of which pronunciation is evoked under the general heading of French vowels, it is because the variations that exist affect mainly the vowel phonemes, hardly the consonant phonemes.

PARISIAN FRENCH

For centuries, Paris, the capital of France, has been the cultural and intellectual center of the French-speaking world. Historically, it is the speech of the Parisian region, the Ile-de-France, which has formed the basis of the national French language - standard French. This speech, spreading from its birthplace, became, with the increasing centralization of the country, the official, and, today, the practically ~~the~~ universal medium of intercommunication in France, sometimes co-existing with, but very often supplanting progressively local forms of speech — patois and dialects, of various types either derived from Latin, like standard French, or widely different from it, like Basque, Breton, Alsatian and Flemish. A hard-to-kill belief, extremely widespread outside of France, which maintains that the best French is spoken in Touraine, is quite unjustified.

It is generally affirmed by specialists on French pronunciation, that the kind of speech having greatest prestige is that of cultivated native Parisians, and, within the French cultural setting, it is this speech that is proposed to foreigners and to Frenchmen desirous of ridding themselves of provincial speech habits. In reality, this choice refers to more than just pronounciation, and is, at the present day, rather restrictive. Firstly, if Frenchmen are quite strict about matters of grammar and style, they are relatively lenient with respect to the pronunciation differences of other Frenchmen. Secondly, modern means

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of communication, radio, television, movies, travel, education and greater mobility of population have greatly accelerated the process of convergence begun centuries ago. Parisian-type models tend to impose themselves more and more. Sometimes this conformity of pronunciation is partial, in other cases it is very considerable. Thus, the speech of large areas of Northern France, especially that of educated persons from urban centers, is today not very noticeably different from that of Parisian French, and the same is true for many speakers from other regions. A sharp delimitation is difficult to establish: Parisian speech itself is not absolutely homogenous, even among speakers belonging to the more cultivated social groups or classes. For these reasons, it seems best to set up for French pronunciation a more comprehensive norm than the one usually accepted, but which can only be defined negatively; an acceptable pronunciation is one having no clearly marked regional, or social class characteristics. Many young provincials who come to study or to work in the vast melting-pot that is the Paris area generally retain only such peculiarities as pass unnoticed and learn to rid their speech, often to a very great extent, of those features that reveal their origins.

For pedagogical purposes several degrees of acceptability may be recognized:

1) minimum: a mastery of pronunciation sufficient for easily intelligible communication even though a foreign accent is evident;

2) A pronunciation that French hearers consider to be that of a French speaker (Belgian, Swiss, Midi, etc.) but not conforming to the norm specified above;

3) speech not apparently different from the norm.

The French Vowel System:

If the method for isolating phonemes is applied to the speech of

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a fair-sized sampling of French-speakers, it will be found that the results are not homogenous. Some speakers make more phonemic distinctions than others. These differences concern mainly the vowel phonemes - their number and their occurrence: certain distinctions are valid for all speakers of French while other differences do not have a general and imperative character. A knowledge of these possibilities allows for a clearer understanding of the way French vowels are used within the frame of the language, and, at the same time, it reveals to the teacher the tolerances that exist within the language with respect to the use of the vowels. It permits him to distinguish between those phonemic distinctions that must be made at any price and in all cases, and those whose difference does not have this absolute, necessary character, and which, for this reason, may be dispensed with especially when the objective is the first degree of acceptability: easily intelligible communication. The French hearer makes allowance quite naturally for variations in the use of phonemes of this latter type.

It is impossible in this work to indicate all the vowel systems observable in the French speaking community. Only three of these will be presented but they should suffice to provide adequate insight into the manner in which the French handle their vowels.

These are:

1) A minimum system
2) A simple system with Parisian-type characteristics
3) The Parisian-type system generally proposed by orthoepists.

1) The minimum vowel system presents the phonemic distinctions that must be preserved at all costs and in all phonic contexts; they are those observed by all native French speakers.

THE MINIMUM SYSTEM

The minimum system may be schematized as follows:

	oral			nasal		
	front-spread	front-rounded	back-rounded			
high	i	y̲	u			
mid	e	ø̲	o	ẽ̲	(ø̲̃)	õ̲
low		a			ã̲	

The phonemes underlined have no close equivalent among the English phonemes.

This minimum system is not simply an abstraction. Many speakers in the south of France (the Midi) and in the outlying districts of the French-speaking world (non-metropolitan France and the former colonies) have this system.

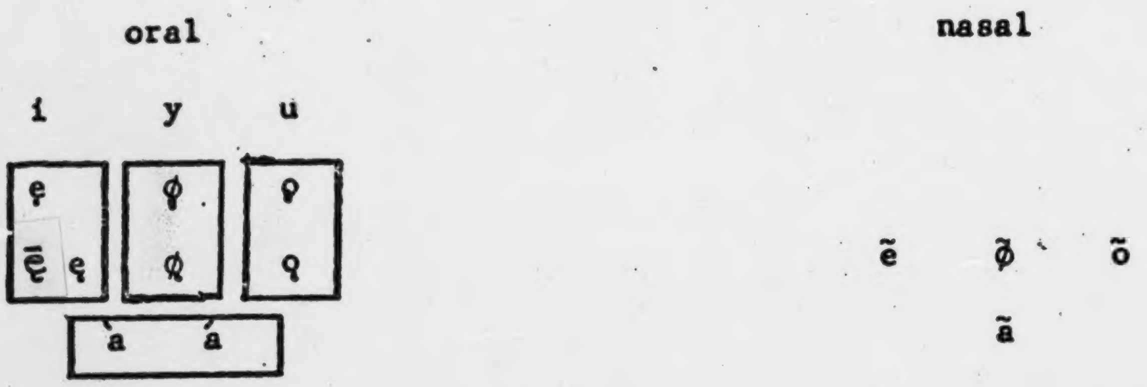
THE SIMPLE PARISIAN-TYPE SYSTEM

2) System no. 2 is characterized by the presence of two mid front spread oral vowels and two mid back-rounded vowels in place of the single vowel phoneme of each of these types found in the basic system. In our opinion, this system should be recommended for teaching, as it combines relative simplicity with the features that are preserved by Parisian speakers of the younger generations:

oral			nasal		
i	y	u			
e	ø	ǫ	ẽ	ø̃	õ
ę		ǫ			
	a			ã	

THE TRADITIONAL PARISIAN-TYPE SYSTEM

3) System no. 3 has a still greater number of phonemes. For many decades now it has been recommended by specialists of French pronunciation. It represents distinctions that are fairly general among Parisian speakers of the older generation.



The last two systems (numbers 2 and 3) diverge from the basic system (no. 1) by the fact that certain of the basic vowels are split into two, and, in one case, three distinct phonemes. Each of these phoneme groups may be said to form a subset. Each subset appears here in a box. Whereas the basic phonemes remain distinct from one another in every position of occurrence and in the speech of all French speakers, the phonemes appearing in the same box either do not remain distinct from each other in all contexts (e.g. in word-final position, only /ọ/ occurs, never /ǫ/) or else, people do not agree in using one or the other in a given word, as in âge for which both [àž] and [áž] are heard. Physically, F/i/ does not differ from F/ẹ/ more than F/ę/ differs from F/e̮/, yet the first distinction is permanent and sharp, whereas the second is not general, having only limited extension among people who use it. To indicate clearly the membership within a subset, the basic vowel symbol has been retained throughout and diacritic marks have been added in order to distinguish between the different units of the subset, when necessary. Thus, /ę/, /ę̄/ and /ę/ are all related to the basic vowel /e/; /ọ/ and /ǫ/ to the basic vowel /o/; likewise, the subsets related to the basic vowels /a/ and /ϕ/.

This manner of presentation corresponds to the way French speakers handle the vowel phonemes of their language, which is different from the way English speakers handle the vowels of theirs.

It is sometimes asserted that the difference between phonemes belonging to a given subset exist, for speakers who make them, only in slow speech. This statement is inaccurate. Speakers who make these naturally, make them in both slow and rapid speech. What may happen is that a speaker who as a rule does not make a certain distinction, may make the distinction when, in some exceptional case this may help to dispel misunderstanding.. Or else, it is the hearer, who may not make a given distinction in his own speech, who does not perceive the difference in the speech of others.

It should be clear that systems 2 and 3 are overall systems that must be distinguished from partial systems, found in a given phonic context, for instance, in word-final position, or in final checked syllables, etc. In single context are to be found all the phonemic distinctions listed in systems 2 and 3. (These questions will be dealt with below.)

By comparing these various systems, it is possible to establish the general features of the French vowel system and to compare them eventually with the vowels of English.

FRENCH VOWELS COMPARED WITH ENGLISH VOWELS

Resonance: Nasal/Oral:

1) French has two distinct kinds of vowels according to the position of the velum: oral vowels with raised velum and nasalized vowels with lowered velum. The nasalized vowels of French are less numerous than the oral vowels. Their degree of opening and their position of articulation correspond roughly to those of the mid and low oral basic vowels. English does not have nasal vowels as phonemes distinct from oral vowels. Nasalized vowels often occur in English when a vowel is followed or preceded by a nasal consonant, as in man, don't; they are contextual variants of oral vowels. In French, nasalized vowels are, on the contrary, phonemically distinct from oral vowels. They occur in the same contexts and may, by their sole difference, distinguish words; banc/bas (/bã/ba/), bon/beau (/bõ/bo/).

Position of articulation: tongue and lip position:

2) French has three series of vowels: front-spread, back-rounded and front-rounded: two series characterized by lip-rounding and two by front tongue position. English, too, is considered to have three series differentiated by their position of articulation. If a front-spread and a back-rounded series are recognized, English has no counterpart for the French front-rounded series. It only has central vowels with neutral lip position. The French low vowels remain outside these series; there may be only one, and not more than two: one front, one back. They are not characterized by differences of lip position.

3) Degree of opening: As seen in the discussion above, French has a minimum of three degrees of opening in all contexts, but many speakers may distinguish in at least one phonic context four degrees of opening: e.g. moule/môle/molle/mâle (/mul/mọl/mɔl/mɑl/).

In English, the number of degrees of opening that are linguistically relevant is not easy to determine: three to six according to the analyst's point of view. English vowel nuclei showing differences with

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respect to this criterion are not strictly comparable. Differences of degree of opening are often accompanied by other features such as differences of length (long/short), diphthongization (diphthong/simple vowel), tension (tense/lax). In French, differences of degree of opening have a more independent and sharply defined character. The vowels of French form a quite homogenous set of pure tense vowels whose members may be distinguished by the sole feature of degree of opening: compare, for example: French /i-ẹ-ę-a/ English /ii̯-i-ei̯-e-eə̯-æ/

4) Length. When dealing with the question of vowel length, it is necessary to distinguish between phonemic length - length differences which serve to keep phonemes apart - and length differences which are predictable, dependent upon the phonic context in which the vowel occurs. The occurrence of length as a distinctive feature in French is an isolated phenomenon. In the three systems presented, there is only one length distinction with phonemic status: /ę/ę̄/ in system 3. Other length differences in vowels are contextually conditioned. In English, length differences are likewise of two kinds: phonemic and contextually conditioned. However, differences of phonemic length have, it would seem, much greater extension in English. The number of long nuclei listed in the English vowel system given above is larger than the number of short nuclei. But it may be recalled that length is one of a complex set of concomitant vowel-differentiating features in English involving also degree of opening, tenseness of the articulating organs and position of articulation. Also, diphthongization and length are closely allied features in English, unlike what is found in French. Note that in the reading of poetry length is often used to compensate the dropping of a 'mute e'.

The following indications account for the principal differences of vowel duration in French:

1) In word-final position phonemic length differences do not occur. Distinctions between pairs of words like: bout/boue, venu/venue, by differences of length are not characteristic of Parisian and are best disregarded. For practical purposes (and in teaching French pronunciation particularly), all vowels in this position may be considered to be phonetically short. It is important to insist upon this short quality, because, in English,

long nuclei, often diphthongal, are generally the kind that occur in this position. Compare: English bow/French beau, English pa/French pas, English pea/French pie, English shoe/French chou. The French vowels are cut off and not allowed to "die out" like the English ones.

2) In final checked syllables (of systems 2 and 3) length differences are variable. Here vowels occur generally relatively short, with the following exceptions:

a) phonemic length-when a phonemically long vowel occurs as in the speech of those who distinguish between /ę/ and /ę̄/: mettre/, maître.

b) length conditioned by the phonic context and therefore predictable. (A long vowel is one having appreciably the same length as a phonemically long vowel occuring in a final checked syllable.) This is the case when a vowel is followed by a voiced fricative (/v/,/z/,/ž/,/r/) or the group /vr/ which are said to lengthen the preceding vowel of the same word-final syllable. Examples: vive, lave, ruse, mise, loge, page, bouge, par, port, pour, ouvre. The distinction between /ę/ and/ę̇/ does not occur in this context since all vowels are long. For speakers who have only one front-spread low-mid vowel phoneme, /ę/, its length or shortness is determined by this principle of consonant environment. In English, too, a voiced fricative has a lengthening effect upon a preceding vowel so that there is no need for English speakers to depart from their habits in this respect. However, it may be noted that a French vowel followed by the group r + consonant: porte, corde, charte, etc. is short, unlike the vowel of English port, cord, chart.

The terms long and short, as used here, are relative notions. In checked final syllables, vowels are generally longer when followed by a voiced consonant than when followed by a voiceless one: /a/ is longer in rade than in rate, in bague than in bac, vide than in vite; and they are still longer before a "consonne allongeante" than before other voiced consonants. This too corresponds roughly to English tendencies, but often English vowel nuclei tend to be longer than French vowels in similar contests. A noticeable characteristic of English "accent" in French is in fact an undue drawing out of vowels even when these are otherwise produced acceptably.

c) certain vowels always sound long in final checked syllables: such are nasal vowels, (as in hanche, teinte, tonte), and /ǫ/, /ø/ and /á/

as in ôte, jeûne, and pâte. In the case of /ǫ/, /ø/, and /á/ this may, at least in some contexts, be an additional feature that keeps them distinct from /ǫ/, /ø̨/ and /à/ respectively.

In non-final syllables vowels tend to be shorter in a given environment, than in final syllables. For practical purposes all vowels may be considered short in this position.

Speakers who use the basic system do not make particularly noticeable differences of contextually conditioned length in their speech. Their vowels are never very long.

2) Occurrence of phonemes or distribution. It has already been stated that the basic vowel system of French (system 1) contains the vowel phonemes which remain distinct from each other in all possible contests of occurrence, but systems 2 and 3, which contain a greater number of phonemes, represent an overall system, based on the collation of the partial systems existing in given contexts. For instance, the phonemic distinction between /ę/ and /ę/ exists practically only in final free syllables, that /ę/ and /ē/, /ø̨/ and /ø/ but never in final free syllables. Before an /r/ in a checked syllable, only low mid vowels occur: père, port, peur. In word-final position and before /a/, in Parisian speech, only [ǫ] occurs, not [ǫ]: rose, chose. In French non-final syllables usually considered unstressed, the basic phonemic distinctions are preserved. There is hardly any vowel distinctions such as takes place in English unstressed syllables where many speakers have only a single phoneme /ə/: French général/ženeral/, English general/ǰenərəl/.

General Articulatory Habits

It is very often quite possible, even without hearing a single word spoken, to guess, simply by the observation of the articulatory movements made, whether a speaker is talking French or English. The reason for this is that the articulatory habits in French are quite different from those in English: the movements made by the organs, even for sounds that are phonetically quite similar, have properties that are peculiar to each language.

French vowels have a pure homogeneous character throughout their emission, this requires, from the articulatory standpoint, that there be practically no perceptible movement of the speech organs during the time of emission of the vowel sound. This stability of the organs is assured by considerable muscular tension which accompanies the production of the French vowels. At the same time, the lip and tongue positions of French vowels are, in most cases, well removed from their neutral position; for front vowels, the tongue position is well front and for back vowels, well back; lip rounding and lip spreading, relevant, are carefully produced, and remain in place, in a stable manner, during the entire duration of the vowel sound.

In English, the vowels are characterized generally by less muscular tension than those of French. The movements of the articulatory organs are not as energetic, slower, and of lesser amplitude. As a result of all this, most English vowels are less removed, with respect to tongue and lip position, from the neutral position than French vowels, and are more likely to be influenced by the articulation of neighboring consonants.

To overcome the tendencies that are natural for English but not for French, the English speaker must try to acquire new articulatory habits. This is not only required for correcting foreign accent, but has a bearing upon comprehension. The relative importance of certain phonetic features is not the same in both languages, even when, in a phonemic analysis both may be defined as distinctive features. For instance, in French, /i/ and /y/, /e/ and /ø/, are distinguished solely by lip position: spreading vs. rounding. It should therefore not be surprising to find this distinction well polarized. In English, lip position is not by itself a unique distinctive feature; it is accompanied by sharp differences of tongue position. These combine to form a complex difference, as for /i/ and /u/, /ii̯/ and /uu̯/, etc. Also, in French, differences of degree of opening very often serve by themselves to keep vowels apart: /i/ẹ/ę/. In English, differences of degree of opening are more often accompanied by other differences such as length or diphthongization.

The passage from a French vowel sound to a following sound requires particular attention. When a French vowel sound is uttered in isolation, its homogeneous character is assured by the fact that the position of articulation required is reached before any sound is produced, and no pertinent movement of the articulating organs takes place as long as the sound is being produced. The transition between the vowel and the consonant, is such type that no perceptible intermediate sound ("off-glide") is produced. When two vowels belonging to separate syllables follow each other, the transition is made rapidly without perceptible glide sound in French, crěons /kreõ/ and crayon /krejõ/ are not pronounced alike.

[redacted]

In English, the vocalic sound begins before the position of articulation is reached and since the articulating organs are practically never at rest, that articulation is hardly reached before these organs move in the direction of the position characterizing the next sound in the speech sequence. This applies not only to the long vowels which, as we have seen, are fairly normally diphthongized, but also to the so-called short nuclei. This is particularly noticeable when these vowels acquire a relatively long duration before a voiced consonant.

The Vowel Sounds of French

High Vowels:

French has three phonemically distinct high vowels: front-spread /k/; front-rounded /y/ and back rounded /u/.

French /i/

French /i/ is a high front-spread oral vowel. Its distinctive features are revoiced by the following pairs: high with respect to (document illegible at this point) . . . , bougie/bougé, filon/félon, il/elle, mine/mène, insiste/inceste, pister/pester;

spread with respect to /y/: scie/sue, mis/mû, mire/mure, kilo/culot;

front-spread with respect to /u/:mis/mou, quitter/coûter, mille/moule, mystique/moustique.

The relation between /i/ and the corresponding semi-vowel /j/ is of a particular nature. The difference between the resonant nucleus /i/ and the fricative /j/ is found to distinguish words only in one phonic context: in word-final (or syllable-final) position, as in words like pays/paye [pei/pej], abbay/abeille [abei/abej], gaï/ail [ai/aj], caïman/deraillement [(k)aimã/(der)ajmã]. In other positions, the occurrence of [i] or [j] is either predictable from the phonic context, eg. only /i/ can be expected between consonants as in *mine* [min], only /j/ between vowels as in *crayon* [krejõ], or else either one may be used without alteration of the identity of the word: *lions* "let's bind" is either [liõ] or [ljõ]. In other words, except in the one position where their difference is phonemic, the two sounds act as variants, contextual or optional, of a same phoneme. Linguists say that in these contexts the phonemic distinction between /i/ and /j/ is neutralized.

When they are not phonemically distinct, i.e. elsewhere than in syllable-final position, one can say that generally speaking [i] occurs before a consonant and [j] before a vowel. Thus, with [i], *pile*, *tire*, *mite*, *naif*, etc.; with [j] *pied*, *tien*, *pien*, *siège*, *pieux*, etc.

This principle accounts for the vast majority of cases, but is not without exceptions; for [i] may occur before a vowel. In this case, the [i] is followed by a j-like glide linking it to the following vowel.

(1) [i] occurs before a vowel when it is preceded by one or two consonants followed by *r* or *l*: *crier* [kRije]/krier/, plier [plije]/plie/, ouvrier [uvRijo]/uvrie/, *client* [klijã]/kliã/, striar [stRijo]/strio/, etc. In the speech of most people, this j-like glide is identical with intervocalic [j], so that *crions* rhymes with grillons [gRijõ] and it is immaterial whether we transcribe both phenemically /kriõ/, /griõ/ or /krijõ/, /grijõ/. When not preceded by a consonant cluster ending in *r* or *l*, [j], the normal choice before a vowel, remains well distinct from the sequence [ij] as illustrated by *biais* [bję], *pied* [pje] and *piller* [pije].

2) The place of a morpheme boundary may produce a situation where the use of [i] or [j] is optional. When a radical ending in /i/ is followed by a suffix beginning with a vowel, [i] and [j] are generally both possible, except in the context covered in 1) above. This situation arises particularly in verb forms. Either the integrity of the radical (e.g. /li-/, /fi-/) may be preserved as it occurs in the short unsuffixed form of the verb (*je lie* [li-], *je me fie* [fi-], etc.) and the suffixed forms (*lions*, *liez*, etc.) pronounced with a j-glide between /i/ and the following vowel: or else the contextual rule may apply, and [j] is employed,,as is usual before a vowel: [ljõ], ljẹ].

There are speakers who tend to use regularly [j], and others [ij]; still others use sometimes one, sometimes the other: *lier* [ljẹ] but *fier* [fijẹ]; [ljõ] but [ljã]. A few other common verbs of this type are: *scier*, *nier*, *renier*, *dénier*, *défier*, *méfier*. Verbs of three syllables or more are generally pronounced only with [j]: *étudier*, *torréfier*, etc. Emphasis on sentence rhythm may, with some speakers, determine the choice of one or the other. Many provincials tend to say: *je lie* - *nous* [lijõ] - *nous avons* [lijẹ], etc. Parisian speakers, on the contrary, usually pronounce: *nous* [ljõ] - *nous avons* [ljẹ], etc., following the contextual rule. However, the forms of the verb: *rire*: *riant* [rijã], *rieur* [ijør], *riait* [rijẹ], etc. seem to be pronounced more usually with [ij]. Students learning French may well choose one form or the other.

3) some similar variations exist in the case of nonanalyzable words: the king of beasts (lion) and the third city of France (Lyon) may be either [ljõ] or [lijõ]. Here, it is probably safer to recommend the pronunciation with [j] which is normal in Paris.

French /i/, like all French vowels, is tense and homogeneous. The lips are well spread and the front of the tongue raised as high towards the hard palate as is compatible with vowel quality. The tip of the tongue is against the lower teeth. French /i/ has no exact English equivalent. The English sounds closest are /i/ and /ii̯/, the vowels of the words pit and beat. These vowels are defined in English by the features high front-spread, but they are different in many ways from the corresponding French phonema.

English /i/ is, like French /i/, non-diphthongized. However, it is too lax, for it to serve as a tolerable equivalent of French /i/; the tongue position is too low and too central, the lip position too neutral, and the tension of the articulating organs is lesser. Also, it never occurs in (stressed) word-final position whereas French /i/ does.

English /ii̯/, the most usual substitute employed by English-speakers for French /i/, is closer and tenser than English /i/, but it differs from French /i/ by its lesser lip-spreading, lesser muscular tension and by its long diphthongal nature. The use of this long nucleus in place of French /i/ in word-final position where French vowels are comparatively short, is particularly offensive to French ears. Compare: French si - English sea, French mis - English me.

The substitution of English /ii̯/ for French /i/ also tends to obscure the distinction between French /i/ and French /ij/, this latter group also having English /ii̯/ as its closest equivalent. In French, pairs of words like qui /ki/ - quille /kij/, gris /gri/ - grille /grij/ are perfectly distinct. When an English-speaker pronounces, in a French context, the word [fii̯] (fee), a Frenchman cannot tell from the pronunciation alone whether fi [fi] or fille [fij] was meant.

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French [j] has the same place of articulation as French [i], but the tongue is closer to the hard palate, which normally results in consonantal friction. Some English speakers use a [j] that is too vowel-like, and which French hearers perceive as [i]. [j] between two vowels and in final position may cause difficulty for English speakers who often tend to identify it here with English [i̯], the non-syllabic diphthongal element of English, /ii̯/, /oi̯/, etc. French [j] generally, and particularly in that position is a true fricative: ex. boil, houille, mouille, seuil, fille, groseille, etc. What is noted [i̯] for English is a diphthongal glide which never attains fricative closure. Besides, between two vowels, French [j] belongs clearly to the same syllable as the second vowel, just as any consonant occurring between vowels. Compare French crayon [kre-jõ] - English crayon [krei̯-an], French bâilleur [ba-jør] - English buyer [bai̯ (r)]. English speakers should treat French [j] here as in beyond, making the [j] the first sound of the syllable in which it occurs, or try to pronounce a rather emphatic [j] in order to obtain sufficient friction.

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French /y/

French /y/ is a high front rounded oral vowel. Its distinctive feature are revealed by the following pairs: high with respect to /ø/: dû/deux, cure/coeur, lurette/fleurette; front with respect to /u/ or /ø/: rue/roue, dessus/dessous, rugir/rougir, mule/moule, hurler/ourler, huis/oui, juin/joint, fuir/fouir; rounded with respect to /i/: (see /i/).

This phoneme occurs in two different forms: as a syllabic - a vowel - pronounced [y] and as a non-syllabic semivowel [ɥ]. Unlike French /i/ and French /j/, there are no contexts where [y] and [ɥ] can be definitely shown to be two distinct phonemes. Rather, they are variants of the same phoneme. Their sole difference cannot serve to distinguish words and the occurrence of one or the other is either predictable from the phonic context or else without effect upon the identity of a given word. The general rule, accounting for the vast majority of cases, is that [ɥ] occurs only before vowels; [y] finally and before consonants. In some cases, [y] may occur also before vowels.

Examples with [ɥ] before /i/ are especially frequent: *puis* [pɥi], *fruit* [fRɥi], *huile* [ɥil]. Examples with [y] finally: *bu* [by], *tu* [ty], *sue* [sy], pus [py]; [y] before a consonant: *bulle* [byl], *luge* [lyž], *rhume* [Rym]. [y] is also found before a vowel when it follows a cluster of consonants ending in [r] or [l]. Thus, *truelle*, *gruau*, *cruel* are generally pronounced with [y] and in two syllables [tRy-el], [gRy-o], [kRy-el], but *truite* is pronounced [tRɥit] in one syllable with [i].

In many cases either [y] or [ɥ] are heard before a vowel other than /i/ (cf. a parallel situation, sect. 2, p. 48). This is the case notably when a morpheme boundary falls between /y/ and the following vowel, as, for example, when /y/ is the final phoneme of a verb radical, and the following suffix begins with a vowel. In this case, either (1) the contextual principle may prevail according to which semivowel appears before a vowel, or 2) the [y] which occurs in the unsuffixed form may be retained. Thus, a form like *tuons*, gramatically divisible into *tu-ons* may be pronounced either as [tyõ] in two syllables with [y] or as [tɥõ] in one syllable; likewise, *tuer*, *tué*, *tuez* as [tye] or as [tɥe], *tuant* as [tyã] or [tɥã], etc., but necessarily (*nous*) *tuions* [tɥjõ], (vous) *tuiez* [tɥjo]. Other frequently employed verbs of this type are: *puer*, *ruer*, *muer*, *suer*, *remuer*, *arguer*, *huer*, *constituer*, *restituer*, *destituer*, etc. This same latitude applies equally to forms other than verbal ones; other words composed of a radical and a suffix, like the nouns: *buée*, *nuage*, *ruelle*, etc., as well as to a number of not analyzable words like *muet*, *muette*, *luette*. Parisian speakers tend to generalize the use of the semivowel [ɥ] before a vowel, except in words of the type *gruau*, *truelle*, etc. (see above). However, both forms, those with the semivowel and those with the vowel coexist often in the speech of the same person; the use of one or the other seems in many cases, to depend upon features such as emphasis, sentence rhythm and on the consonant groups formed in connected speech even across word boundaries.

The syllabic variant [y] is made with rounded tense lips approximately as for French [u]. The front of the tongue is raised towards the hard palate as for French [i] and [ȩ]. The tongue is not raised quite as high and as front as for [i].

The non-syllabic semivowel [ɥ] has approximately the same tongue and lip position as [y]. It may be described as a very short [y], too short to constitute a syllable nucleus by itself. The duration of the sound is that of a consonant (compare: *pli*-*puits*). [ɥ] has other consonant-like features: the sound may be produced with some friction; this arises from a slightly smaller opening of the lips and from a slightly higher tongue position. The phoneme /y/ made by the simultaneous combination of lip-rounding and front tongue position has no counterpart in English. English /uu̯/, is often spontaneously equated with F/y/, but French hearers perceive this English nucleus rather as a badly-pronounced French /u/, and as a substitution characteristic of English speakers. It is extremely important to distinguish in all cases French /u/ and French /y/ which serve to keep many words apart (see examples above); their confusion will completely alter the identity of many words, very much as if the vowels of *bad* and *bed* were confused in English.

Other English speakers tend to dissociate the front tongue position and the lip-rounding and to render them successively as [ju]; compare English *now* and French *pu*; English *pure* and French *pure*. This is highly offensive to French ears. The usual practice for teaching [y]: rounding the lips as for [u] and attempting to pronounce [i] (which has for effect the advancement of tongue position), is a useful starting point for learning this sound, but it must be remembered that it is only a starting point. It is extremely important that the lips be rounded from the beginning of the syllable in which it occurs to avoid any kind of on-glide.

In a parallel manner, the confusion of [ɥ] and [w] is equally inacceptable, for it results in the suppression of the difference between words like: muette/mouette, lui/Louis. Care must be taken not to make [ɥ] too long; the result being a vowel sound, and not a semi-vowel.

Examples for practice:

[y]: su, vu, tu, sur, pure, nul, lune, cruche, murmure, ululer, sulfureux, mouillure, humour, humeur, usuel, survenu, surplus, surdite, sous-cutané, joufflu, souillure, soudure, brûlure, secouru, bourru, cousu, moulu, Mulhouse.

[ɥ]: hout, suicide, truite, buisson.

French /u/

French /u/ is a high back-rounded oral vowel. Its distinctive features are revealed by the following pairs:

high with respect to /o/: mou/mot, fou/faux, croûte/crotte, douter/doter, pourtant/portant; back with respect to /y/: (see /y/); back-rounded with respect to /i/: (see /i/).

Like /y/, /u/ occurs in two forms - as a syllabic sound, a vowel [u] and as a non-syllabic semi-vowel [w]. The use of one or the other is generally regulated by the phonic context: [w] only occurs before a vowel, and is especially frequent before the vowel /a/. Examples: toi [twa], ouest [west], poêle [pwal], moins [mwɛ̃]. [u] appears finally and before a consonant: pou [pu], poule [pul]. However, [u] may also occur, in certain cases before a vowel. However, in all these cases, the occurrence of [u] or [w] (cf. [y]-[ɥ]) is always either predictable, or else, without incidence upon the meaning of a given word in those contexts where one or the other may appear. For these reasons, [u] and [w] may be considered to stand to each other in relation of variants rather than that of distinct phonemes.

Before a vowel, it has already been asserted, there are a number of cases where [u], and not [w] appears. [u] alone occurs when the syllable begins with a consonant group ending in r or l: prouesse, brouette [prues, bruet]. However, when the following vowel is /a/ or /ẽ/, the semi-vowel [w] is heard: froid [fRwa], droit [dRwa], ployer [plwaje], groin [gRwẽ], etc.

In some cases, [u] and [w] are equally possible before a vowel. As for /i/ and /y/, this situation arises particularly when a morpheme boundary falls between the phoneme /u/ and the following vowel. This double possibility likewise concerns mainly verb forms and derived words. Thus, for example, verb forms like jouer, jouons, jouait, etc. are analyzable into two successive morphemes: jou-er, jou-ons, jouait. These may be pronounced as either one-syllable words with the semivowel [w]: [ʒwe], [ʒwõ], etc., or else as [ʒue], [ʒuõ], in two syllables. The syllable division parallels here a morpheme division. This accounts for a two syllable form troua [tRua] (as distinct from trois [tRwa]), but the form would probably sound [tRwa] in Paris if it were not a "passé simple" which does not belong to everyday speech. Other verbs of this same type are: douer, rouer, louer, nouer, renouer, vouer, avouer, dévouer, bafouer, amadouer, tatouer, réjouir, etc. Nouns, too, may be treated in the same manner: For example, words like mouette, girouette, bouée rouet, tatouage, louage, which are, or seem to be, words analyzable into a radical and a suffix, and also some words that are not analyzable, like Rouen, souhait. However, in Parisian speech, the tendency is to use the semivowel [w] before a vowel in those cases where a double choice is possible. Speakers from many provinces tend to use [u] more often in contexts where a double choice exists.

The syllabic sound [u] is a pure tense vowel. For its production the lips are tense and well-rounded. At the same time the tongue is drawn back and the back of the tongue is raised high toward the soft palate and held tense.

French [u] is generally equated with English [uu̯]. The latter differs by its diphthongal character from the French sound which is never characterized by a movement of the speech organs. Also, the initial tongue position for English [uu̯] is lower than that of the French [u]. The general muscular tension of the articulating organs is considerably greater for French [u] and, quite important, the lips are well protruded, much more than in English, and forming a very small rounded orifice.

The non-syllabic variant [w] has approximately the same tongue and lip position as [u]. It may be described as a very short [u], which cannot by itself serve as a syllable nucleus, and which has several consonantal characteristics. The duration of the sound is that of a consonant rather than that of a vowel (compare *poisse* - *place*). At the same time, [w] is generally produced with greater friction than [u]: with the lip opening somewhat less than for [u]; also, the tongue position may be slightly higher. English [w] is made with speech organs that are much less tense and with a noticeably less rounded lip position. Although the group, consonant + *w* exists in English as in *twill*, *queen*, *sweet*, *dwarf*, *twain*, etc., there are English speakers who use a [w] that is too long, too lax or with a tongue position that is too low for French. In this case, French hearers perceive an *o*-like vowel and not their [w]: English-speaking characters on French music-hall stages are supposed to say *moâ* [moa], for *moi*, *toâ* [toa] for *toi* [twa].

Mid Vowels

French has three basic kinds of mid vowels: front-spread, front-rounded and back-rounded. It has already been shown that all types of French present a minimum of three degrees of opening, and, in all contexts, at least one mid vowel of each of these types is phonemically distinct from a high vowel of the same position of articulation and from a low vowel. Mid vowels of each type are characterized by considerable differences in sound quality due essentially to different degrees of opening. These differences may have phonemic value or not. This may depend 1) upon the particular phonemic habits of the speaker and 2) upon the context in which these occur.

In dealing with the mid vowels, it is necessary to consider them 1) from the point of view of the individual speaker in order to determine the number and type of mid phonemes which he uses in his speech and which may vary from speaker to speaker, and 2) from the point of view of the French-speaking community and the requirements of intercommunication, which includes the pedagogical problem of teaching mid vowels: what to teach - what is acceptable.

In order to approach these questions methodically, two major possibilities must be examined: 1) the case of speakers who use the basic system of vowel phonemes and who have only one mid vowel phoneme of each type and 2) the cases of speakers who have more than one mid vowel phoneme of each type. In this latter case, the phonemic difference between these is not on the same plane as that existing between the basic vowels, for the mid vowels of the same type do not remain distinct from each other in all phonic contexts, and they may be represented as a subset of phonemes related to a basic vowel phoneme.

French /e/

The basic vowel /e/ may be defined as front-spread mid oral. Its phonemic independence may be established by the following comparisons:

/e/ is lower than the high vowel /i/: (see /i/);

/e/ is higher than the low vowel /a/: raie/rat, aînée/année, fête/fat, sec/sac, baigne/bagne, faible/fable, béton/bâton, perler/parler;

/e/ is spread with respect to /ø/: paix/peu, serre/coeur, pré/preux, selle/seule, flairons/fleuron;

/e/ is front-spread with respect to /o/: thé/tôt, ferme/forme, chef/chauffe, errez/aurez, fermer/former;

/e/ is oral with respect to /ẽ/: fête/feinte, téter/teinter

Southern and many non-metropolitan speakers generally have in their speech only one front-spread oral mid vowel phoneme, which has two principal variants: a low mid variant [ę] which occurs in checked syllables (i.e. ending in a consonant) and a high front-spread vowel [ẹ] which occurs in free syllables (i.e. ending with the vowel): examples with [ę]: *fermière* [fęrmjęr], *presse* [pRęs], *lièvre* [ljęvR], *espère* [ęspęR], etc.; examples with [ẹ]: *pré* [pRẹ], *épée* [ẹpẹ], *précéder* [prẹcẹde], etc. The proper use of these variants according to this simple contextual principle is largely sufficient for communication within the frame of French and is in no way an indication of a foreign accent. Teachers and students, when in doubt concerning the choice in a given word between [ẹ] and [ę] may safely apply this rule, which many specialists of French pronounciation consider to represent a basic tendency of the language. It is never wrong; it is rather a limit of tolerance.

II. This usage, however, is not general. Most speakers of Central and Northern France and especially Parisians, distinguish between two and sometimes three mid vowels of the type *e* (see systems two and three). It is one of the features which characterize the Parisian style of speech.

Unlike the phonemic distinction holding between the basic vowels, the phonemic distinction between a high mid /ẹ/ and a low mid /ę/ is generally limited to one context, namely to final free syllables, that is, word or word-group final position.

In other contexts, the difference between these vowels cannot serve to keep words apart; they stand rather in a relation of contextual or optional variants. Such distinction limited to one or only certain contexts is a neutralizable phonemic distinction (or opposition). The relationship involved here is a particularly intimate one, and is, indeed felt to be such by French speakers. It is very different from the relation existing between French /ẹ/ and French /i/ which also differ from each other by one degree of opening. Besides, this relation is not at all comparable to that existing between *e* and *ei* in English, whose indistinction can be a hindrance to intelligibility (for instance: *met*/*made*, *bell*/*bail*, *let*/*late*, etc., are never confused).

If on the level of the individual speaker, the phonemic distinction between /ę/ and /ẹ/ can be indisputably established through the analysis of the speech of many Parisian and standard French speakers, the situation on the social level is more blurred. The status of the phonemic distinction considered from an overall social point of view is not far removed from that of variants. For even in word-final position, no sharp line can be drawn between words containing /ę/ finally and those containing /ẹ/ in this position. The inventory of words containing, one or the other varies from speaker to speaker. Still, word final-*é* of the spelling is always pronounced /ẹ/. A wide-spread distinction is made among verb forms: the infinitive (*aimer*), and the past participle (*aimé*), forms of verbs belonging to what is traditionally called the first conjugation, are pronounced with [ẹ] and the conditional and imperfect forms (-*ais*, -*ait*, -*aient*) with [ẹ]. Most speakers also differentiate words like *pré*/*prêt*, *crée*/*craie*, *ré*/*raie*, *thé*/*taie*, *gué*/*guet*, etc., but [ẹ] may be heard in all of these words. In any case, in final free syllables [ẹ] is much more frequent than [ę]. This situation permits considerable latitude with respect to teaching and learning the phonemic distinction in question. The rate of speech is not particularly relevant to the maintenance or not of the distinction between /ę/ and /ẹ/.

In contexts where the distinction between [ę] and [ẹ] is not phonemic, that is, non-finally, their occurrence may be regulated in several different manners:

1) According to the nature of the syllable: ẹ in free syllables *hé-bé-té* [ẹ-bẹ-tẹ], *pré-cé-dé* [pRẹ-sẹ-dẹ] and e in checked syllables *cer-bére* [sęR-bęR], *espéce* [ęs-pęs], etc. This principle of alternance is by far the most usual one observed. It exists not only

in the mass of isolated words, but is also found within verb conjugations and families of derived words. For instance, in verbs of the type céder (léser, lécher, célébrer, téter, pécher, etc.), we have je céde, tu cédes, etc. [sęd], nous céderons [sęd-rô] (here the spelling -é- does not represent [ẹ]), etc. with [ę] in checked syllables, but cédé, céder, cédez [se-de], cédons [sẹ-dõ], il cédait, etc. [sẹ-dę] with [ẹ] in free syllables. This principle is also applied by many speakers to cover many, or even all, verbs in which a front-spread mid vowel occurs sometimes in a non-final free syllable, sometimes in a checked (final) syllable; for instance: baisser, laisser, baiser, cesser, mêler, fêler, embêter, seller, sceller, saigner, quêter, aimer, fêter, forms of the verb mettre: metteg, mettons, etc. It also applies to non-verbal forms: maître [mętr] but maîtresse [mẹ-tręs], lettre [lętr] but lettré [lętrẹ], bête [bęt] but bâtise [bẹ-tiz]. This automatic phonetic alternation should not be confused with the morphological (grammatical) alternance that exists for verbs of the type lever (je lève [lẹv]): nous levons [lvõ]). The principle of phonetic alternance may coexist with other principles. For instance, many speakers use the low mid [e] before a following /r/ even in a free syllable aéré [a-ę-rẹ], perron [pę-rõ] where others have [ẹ].

2) Another principle that may determine the appearance of [ę] in a free syllable is that of analogy. The tendency, here, is to conserve everywhere in a verb conjugation or in derived words, the vowel appearing in the simple form of the word in the final syllable. Thus, on the analogy of (je)cesse [sęs], a speaker may say cesser [sę-sẹ], both forms containing [ę] and not [sẹ-sẹ], also possible in accord with the contextual rule, likewise, métrage with [ę] on the analogy of mètre, etc. The speaker has thus a choice between automatic alternation and analogy.

3) With some speakers the degree of opening of some vowels may be

determined by that of the vowel of the following syllable. According to this principle, when the vowel of the final ayllable of a word is low mid (ę, ǫ, ø̨) or low (a, á), a front-spread oral mid vowel appearing in the preceding syllable will be low mid [ę]. When, on the contrary, the vowel of the final syllable is high mid (ẹ, ọ, ø̣) or high (i, u, y), it is the high mid variety [ẹ] that occurs: thús pressez would be [pre-se] but pressant would be [pre-sã]. It has been observed that there are some speakers who do just the opposite and dissimilate.

4) Spelling: many persons pronounce words containing the group ai as in baisser, laisser, baiser, etc. regularly with [ę]. Few Frenchmen differentiate between the -rai of the first person singular of the future and the -rais of the conditional, both being pronounced /-rę/ by a majority of those who distinguish /ẹ/ and /ę/.

In final free syllables, where /ẹ/ and /ę/ are distinct phonemes, [ẹ] is distinctly higher than [ę]. In non-final syllables where their difference does not have a distinctive value, [ẹ] is less high and [ę] less low. Sometimes these are perceived as quite distinct, but often they may be considered practically to fall together. This intermediate sound is referred to in books on French phonetics as mid e (e moyen).

From the above observations, it seems clear that there is considerable latitude in the use of these variants in non-final syllables. Each has its advantages for teaching: the contextual principle is mechanical, and is applied according to phonetic form of the syllable; whereas the analogical principle is also easily applied but is limited to certain parts of the vocabulary. All the deviations from the contextual rule concern actually the use of [ę] in free syllables. And it may be asserted that the only real impossibility is the use of [ẹ] in final checked syllables. In non-final checked syllables it is found in élever [ẹl-vẹ] on the analogy of present indicative singular élève [ẹlę·v].

In addition to the phonemic distinction between /ę/ and /ẹ/, some speakers also differentiate between a phoneme /ẹ/ and a phoneme /ẹ̄/, which distinguish pairs of words like: maître with /ẹ̄/ and mettre with /ẹ/, reine or rêne and renne, bêle and belle, l'être and lettre, etc. This distinction exists only in final checked syllables. People who do not have this distinction pronounce all such pairs alike. Among those who do make the distinction, the number and inventory of words containing one or the other phoneme is variable from speaker to speaker. The distinction is frequent in the speech of Parisians of the older generation but even there it is not general. It seems best to dispense with teaching it to non-native students of French, to consign it to the domain of passive knowledge, and to recommend [ẹ] in all cases. Or else to teach it as an optional distinction which may be called up when required for purposes of emphasis or clarity. In fact, some French speakers treat the difference precisely in this manner.

The French front-spread mid vowels are all tense pure vowels. The difference between French /ẹ/ and French /ę/ is essentially one of degree of opening while the difference between French /ẹ/ and French /ę̄/, where it exists, is essentially one of length although it may be accompanied by a somewhat lower tongue position for /ę̄/. The English front-spread vowels have their distinctness assured by other differences than these. If English /e/ may be considered as a simple pure vowel, laxer than its French counterparts, English /ei̯/ is a long nucleus, generally diphtongal in nature. The difference in the degree of opening of English /e/ and that of the first wlement of English /ei̯/ may not be particularly great; it is not, in any case, the sole distinguishing feature. English /eə̯/ is a long nucleus often pronounced as a diphthong with a centering glide.

The manner in which English speakers tend to substitute these English sounds for French mid vowels usually depends upon the context. In English, the long nucleus /ei̯/, which occurs finally is the general substitute for French mid vowels in final position. This is quite objectionable, not only for phonetic reasons such as the long diphthongal nature of the sound, but also because it results in a confusion between French /e/ and /ej/: osé/oseille, créé/creil, etc. In positions other than final, English /ei̭/ usually tends to replace French mid vowels when they are phonetically long: beige, chaise, and generally before [z]: maison, raison. However, the long open variety of French /ę/ that occurs before r is generally identified with English /eə̭/.

It is longer than French ę; it is often accompanied by a r-sound that is not the French [R], or else the r-sound is omitted entirely: ferme as [feə̭m].

English /e/ is a usual substitute for French /ę/ when it is short and not final. It is also often used to replace [ę] in non-final syllables: céder, prêter in contexts where [ę] is relatively short. English /e/ is a slightly higher vowel than French /ę/, and has a laxer articulation, noticeable with respect to lip-spreading. It is useful to note, however, that French hearers interpret English /e/ as their French /ę/.

The mid vowels do not develop an intervening glide when a vowel sound follows: créer is pronounced, not [kreje] as English speakers tend to say, but [kRe-e] with a slight weakening which marks the passage from one vowel to the other: the lips and tongue make no movement practically. Likewise, réel is not [Rẹjęl] but [Rẹ-ęl].

French /o/

The basic vowel /o/ is a back-rounded mid vowel, which in all contexts remains distinct from all the other phonemes of French. Its phonemic independence may be shown by the following comparisons:

/o/ is lower than the high vowel /u/: (see /u/);

/o/ is higher than the low vowel /a/: beau/bas, bord/barre, bol/bal, portez/partez;

/o/ is back with respect to the front-rounded vowel /ø/: pot/peu, pore/peur, jaune/jeune, motte/meute, évaporé/apeuré;

/o/ is oral with respect to the nasal vowel /õ/: beau/bon, haute/honte, faussé/foncé, beauté/bonté.

I. As for /e/, not a few Southern and non-metropolitan speakers have only one mid back-rounded vowel phoneme, as in the basic system. The variants of this phoneme are a high mid [ọ] in free syllables and a low mid [ǫ] in checked syllables: *je chôme* with [ọ], *vous chôme* with [ọ], *je chauffe* with [ǫ], *vous chauffez* with [ọ]. However, this kind of pronunciation does not conform to the norms of standard pronunciation. It does not sound foreign however, but provincial. An effort should be made by foreign learners to avoid this. In Parisian French and in standard French generally, there are two back rounded mid vowel phonemes: one high /ọ/, one low /ǫ/. As in the case of the subsets of /e/, these phonemes do not remain distinct from each other in all positions. For this reason, French speakers feel these sounds to be very closely allied; their difference is not comparable to a difference between basic phonemes, and failure to distinguish them is not a very serious hindrance to communication in French. Yet the non-existence of this distinction in a person's speech is much more readily perceived by speakers of Parisian-type French than the non-existence of the distinction between /ẹ/ and /ę/.

The phonemic distinction between /ọ/ and /ǫ/ does not exist in word-final position: only [ọ] occurs, *pot*, *seau*, *tô*[illegible] *métro*, syllables: *saute*/*sotte*, *pôle*/*Paul*, *paume*/*pomme*, *saule*/*sol*, etc. Some Southern speakers do distinguish between these but by using a long [ọ] in the former and a short [ǫ] in the latter. There are two cases where a phonemic distinction is not possible. When the consonant closing the checked syllable is /z/ only [ọ] occurs in this position: *rose*, *pose*, *cause*, *chose*. When the consonant following the vowel is /r/ only [ǫ] is heard: *port*, *tort*, *lors*, *Maure*, *dors*, *gorge*, *porte*.

In non-final syllables the phonemic distinction exists but it is somewhat less chearcut than in final checked syllables. In many cases, the appearance of [ọ] or [ǫ] is motivated, that is, predictable, or else constitutes a variation that has no effect upon the identity of a given word. However, it remains that both [ọ] and [ǫ] may occur in phonetically identical contexts, in this type of syllable and may keep words apart.

Examples of words which are kept apart by the difference between /ọ/ and /ǫ/ occurring in non-final syllable are beauté/botté, côté/coté, peausserie/poterie. These are all words derived by the addition of a suffix to a simple form: beau/botte, côte/cote, peau/pot, where a vowel of the type [o] occurs in a final syllable. The vowel of the simple form tends to be maintained everywhere. However, the use of [ǫ] or [ọ] in non-final syllable can only be deduced from that of the simple form in that appears in a checked syllable as in the words botte, côte, cote. In verb forms and other kinds of families of derived words, the analogy is frequently applied: je chauffe and all forms of the verb chauffer with /ọ/; other verbs of this type: chômer, ôter, frôler, faucher, etc.: je sonne with [ǫ] and all forms of this verb with [ǫ]: other verbs of this type: résonner, voler, loger, coter, roter, noter, botter, etc. Likewise: (haut) haute with [ọ] and hautain, hauteur, also with [ọ]; on the other hand, sot with a final [ọ], but sotte [sot] with [ǫ] in the final checked syllable and likewise sottise with [ǫ].

This principle concerns only derived words. There are, however, other principles founded upon the position or the nature of the syllable, which concern mainly words not formed by derivation or belonging to a verb conjugation but which may also apply to certain of these.

A tendency of Parisian-type French is to use the low mid [ǫ] in all non-final syllables of underived words: docile, bocal, erroné, joli, soleil, solide, etc. have [ǫ] in free syllables. This been extended to some derived words: polaire is usually pronounced with [ǫ] in spite of pôle with [ọ]; likewise, coteau in spite of côte. Another tendency which may conflict with those already described results from the spelling: the written au, ô, eau are often identified with the sound [ọ]. Also vowel harmony may be a factor. What is important to remember is that none of these tendencies is general and that considerable variation exists for the pronounciation of many words: for instance, côtelette, otage, hôtel, autobus, autorisation have as many different and "correct" pronunciations as they have [o]'s. It is rare to find universal adherence to any one principle. The existence in an individual's speech of the phonemic distinction ọ/ǫ is clear especially in final checked syllables but from the standpoint of the speech community there is no sharp delineation between the two. This does not hinder communication among French speakers; in many respects it may be said to characterize rather a style of speech.

The phonetic difference between [ọ] and [ǫ] in the speech of Parisians is a complex one. French phoneticians are generally agreed that the primary difference is one of degree of opening, but this difference is often accompanied by: 1) a difference of tongue position: [ọ] has a tongue position that is relatively further back than that of [ǫ]. In fact, [ǫ] often has a tongue position, which, although considered back, approaches that of a central vowel, which explains why American English speakers often identify it as their vowel of but. There are even French speakers who pronounce [ǫ] with a tongue position so far front, that many French hearers perceive it as [ø]. This latter pronounciation is not recommended, but it does underline the fact that French [ǫ], unlike English /ə/ (as in but) is a rounded vowel even though the lip protrusion may in many cases not be particularly great; 2) a difference of length especially in final checked syllables. Here [ǫ] has a length comparable to that of [ọ] only before /r/ (pore [pǫr], nord [nǫr]) a context in which [ọ] does not occur in standard pronunciation. When /ọ/ and /ǫ/ occur in exactly the same context, /ǫ/ is longer (*saute* [sǭt]/*sotte* [sǫt], *pole* [pǭl]/*Paul* [pǫl]). In final free syllables [ǫ] is short (*pot*). In non-final syllables, length differences are little apparent or inexistent and may be disregarded for teaching purposes.

The English vowel nuclei considered equivalents for French o are the long nuclei /ou̯/, /oə̯/ and the short nucleus /ə/. The use of English /ou̯/ in place of French o is very objectionable because of its diphthongal character, and especially in word final position where French vowels are short. Also, French ǫ is made with lips that are much more protruded than for the beginning of English /ou̯/. English /oə̯/ is often substituted for French /ǫ/ when this sound occurs before an /r/ that ends a syllable (*clore* [klǭr], *corps* [kǫr]). However, a frequent English tendency is to replace the French group [ǫr] by English /oə̯/ dropping the /r/. This is hardly commendable. The French sound is never as low as the English sound, nor as back; it has less lip rounding and no off-glide.

When French [ǫ] occurs short, it is very often identified with American English /ə/, the vowels sound of English *but*, *cud*, *fuss*, etc. As a matter of fact, the tongue positions of the two sounds are indeed rather close, but their lip position is not the same. The English sound is made with neutral lips but the French sound is always made with somewhat rounded lips, and also with greater tension than the English sound. The word *bun* pronounced by an American in a French context would undoubtedly pass for French *bonne*, but this does mean that the vowel sound used would be the correct one.

Besides these identifications based upon phonetic similarity, spelling and the analogy of English words that are written the same as French words and have approximately the same meaning may be a source of error: French *Paul* pronounced as English *Paul*; French *causer* /cǫzę/ pronounced with the vowel of English *cause* /o•/, French *horrible* [ǫribl] with the vowel of English *horrible*.

French /ø/

In all kinds of French at least one front-rounded mid vowel of the type [ø] is phonemically distinct from other vowel phonemes in all contexts. Its phonemic independence may be shown by the following comparisons: /ø/ is lower than the high vowel /y/: (see /y/); mid /ø/ is higher than the low vowel /e/: *peu*/*pas*, *peur*/*par*, *meurtre*/*martre*, *viuille*/*vaille*, *cueillez*/*caillez*; /ø/ is front with respect to the back vowel /o/: (see /o/); /ø/ is rounded with respect to the spread vowel /e/: (see /e/); /ø/ is oral with respect to the nasal vowel /ø̃/ (insofar as /ø̃/ exists as a distinct phoneme in a given person's speech: (see /ø̃/): *jeu*/*jeun*, *eux*/*un*.

I. In most respects, the behavior of /ø/ is parallel to that of /o/, but with certain differences. As in the case of /o/ and /e/, speakers from the outlying regions previously defined, have only one phoneme /ø/. A high variety [ø̨] occurs in free syllables and a low variety [ø̨] in checked syllables: *voeu*, *peu* with [ø̨] and *peur*, *soeur*, *fleuve*, *oauvre* with [ø̨].

II. Many speakers of standard French seem to distinguish between two phonemes of this type. However, this distinction is much less clearcut than that existing for /o/. The use of [ø̨] and [ø̨], even for speakers who make a phonemic distinction in certain cases, is regulated in great part by the context, or is without effect upon the identity of a given word.

In word-final position, as in peu, creux, only [ø] occurs. In final checked syllable a distinction is sometimes made: jeune with [ø̨] and jeûne with [ø] veulent with [ø̣] and veule with [ø], the difference, which here has phonemic value, being with some speakers emphasized by means of length: short [ø̨] as opposed to long [ø̣], but this distinction is far from general; many speakers pronounce them all with an [ø] of some duration. Most specialists inform us that [ø] occurs regularly in final checked syllables before /t/, /tr/, /d/, and /k/ as in meute, neutre, Eude, Pentateuque, but a long [ø̨] is frequently heard in neutre, feutre. In Parisian usage, it is [ø̣] that is heard in the very frequent -euse ending (creuse, heureuse, Meuse), and in Maubeuge.

In non-final syllables, the use of [ø] or [ø̣] is generally determined by one of several factors of a predictable nature: 1) A contextual principle: [ø] in free syllables: leucémie, eunuque, pneumonie, jeudi; [ø̨] in checked syllables: meurtrier, heurter. 2) An analogical principle: in verbal conjugations or in derived words, the [ø] or [ø̣] occurring in a final syllable is maintained whether the non-final syllable in which it occurs is checked or free: jeune-rajeunir, peuple-peupler with [ø], whereas speakers who apply principle Ø1 use [ø] for the second term of the pairs given. 3) Vowel harmony (see French /e/).

The application of these principles varies from speaker to speaker, and a given speaker may not apply any one of these systematically. This results in considerable latitude of pronunciation. For purpose of pedagogy, several possibilities may be retained.depending on how much one relies on the two conflicting principles: contextual and analogical.

Like the front-rounded vowel French /ȳ/, [ø̣] and [ø̨] have no close counterpart in English, A starting point for obtaining this sound from English speakers is to ask them to try to pronounce [ẹ] and [ę] with well rounded lips. However, this can only be a starting point-a learning device.

English speakers often substitute for French /ø/, English /ə/, the vowel of the words *but*, *fur*, which is not acceptable. This English sound is made with a much more retracted tongue position than French /ø/, and without lip rounding, a fundamental feature of French /ø/.

Examples for practice: *pen*, *feu*, *ceux*, *queue*, *preux*, *creux*, *noeud*, *boeufs*, *oeufs*, *pieu*, *suel*, *oeuf*, *soeur*, *fleur*, *pleurez*, *jeune*, *meurtre*, *meute*, *neutre*, *creuse*, *Meuse*, *heureux*, *heureuse*, *peureux*, *peureuse*, *pleureur*, *orgueilleux*, *mousseux*, *pluvieux*, *méticuleux*, *peur*/*pore*/*père*, *seul*/*sol*/*sel*, *jou*/*Jo*/*jet*.

French /a/

The basic vowel /a/. In all types of French, at least one low oral vowel is phonemically distinct, in all contexts, from the other vowel phonemes of the language. The phonemic independence of the basic vowel may ve shown by the following comparisons: /a/ is lower than /e/: (see /e/); low /a/ is lower than /o/: (see /o/); /a/ is lower than /ø/: (see /ø/); /a/ is oral with respect to the low nasal vowel /ã/: *bas*/*banc*, *chaton*/*chatons*, *matez*/*mentex*, *patin*/*pantin*. Some speakers have only one phoneme of this type; others have two.

Speakers who have only one phoneme of this type is their speech use a sound with a tongue position that is central or slightly front of central in all contexts. For purposes of language teaching this has the advantage of simplicity, and it does conform to the speech of certain Parisian speakers. However, most specialists of French pronunciation still recommend a distinction between two low oral phonemes, one front, one back: /à/ and /á/ respectively, a distinction still frequent in the speech of Parisians. The phonemic independence of the two may be confirmed by the following comparisons: *là*/*las*, *rat*/*ras*, *patte*/*pâte*, *chasse*/*châsse*, *malle*/*mâle*, *aller*/*hâler*; in speech where the distinction exists, /à/ is more frequently used than /á/.

Unlike the mid vowels whose distinction as phonemes is limited to certain contexts, no such contextual limitation can be established for /à/ and /â/ in the speech of those persons who make the distinction. Both occur in the most varied contexts. However, if the phonemic distinction is established clearly in the speech of a given individual, the situation on the social or community level is different. Some speakers do not make this distinction at all. Among those who make the distinction, there are considerable variations from person to person, i.e. the use of [à] or [â] in a particular word is often not fixed; /à/ or /á/ in the word inventories containing one or the other. Some speakers say, for example, *cadre*, *Jacques*, *gagner* with /à/, others pronounce the same words with /á/. Communication between speakers is thereby in no wise hindered: the context serves to dissipate any confusion caused by the homonymy of words. From the point of view of the speech community, the difference between /à/ and /á/ bears resemblance to an optional variation. For many speakers the distinction between /à/ and /á/ is a discretional one that they can all up voluntarily as a sort of supplementary clarifying element, particularly in words containing the spelling â: âme, pâte, pâle, etc.

Phoneticians describe the difference between [à] and [á] as a difference between a front low vowel and a back low vowel. For this degree of opening the lop position - spread or rounded - plays no distinctive rôle: their lip position is slightly spread for [à] and neutral for [á]. The difference between a front and a back tongue position especially in final checked syllables (as in pâte) is often accompanied by a difference in length: /á/ is generally longer than /à/. In word-final position all vowels are considered short and in non-final position these length differences may be disregarded. In some speech, the difference in length may well be the primary distinguishing feature, replacing that of tongue position. For speakers who have only one /a/ phoneme, the length differences are contextually determined in the same general manner as the other vowels of French.

From the practical pedagogical standpoint, it seems best not to insist upon the distinction between /à/ and /á/. If the teacher feels that it must be taught, it seems wise to limit the distinction to final syllables (là/las, patte/pâte). French /à/ and /á/ are generally identified by English learners of French with English [æ], [a] and [aə͓], the open nuclei of English. The particular substitution made depends upon the phonic context or may be suggested by the spelling. In final position, only [aə͓] occurs in English and this is the sound English speakers tend to use in this position for both French /à/ and French /á/. English [aə͓] differs from both of these French sounds in this context because of the more or less perceptible off-glide, and by its length. The tongue position of English [aə͓] is further back than that of French /à/; it is much closer to that of French /á/. In final checked syllables, French /á/ is generally long, parallel to the English nucleus [aə͓]. However, care must be taken not to introduce the English off-glide and use the laxer position of the organs: the quality of the vowel sound of English arm (for those who do not pronounce the r) is often almost like French âme; English part almost like French pâte. The substitution of

English [æ] for French [a] in checked syllables is not acceptable. Students should be warned not to use it before r.

English /æ /, the vowel sound of hat, rat, is another frequent substitute which occurs in checked syllables in place of French /a/. For French /à/ the lips are only very slightly spread, much less than for English /æ /. Compare: English pat - French patte, English mass - French masse, English tap - French tape, which are not pronounced alike.

English /a/, the vowel of words like hot, spot, Bonny, which in many kinds of English is not the same as the vowel sound of card, not only because of its shorter length but also because of a somewhat more central tongue position, may pass for a fairly acceptable substitute for central French /a/ its tongue position is more back. But many (American) English speakers also use here a sound that falls rather in the range of French /á/.

French /a/ is never reduced to [ə] in unstressed syllables: for example: French psittacose is pronounced [psitakoz]. Also on the basis of the English pronunciation of a word like barricade [bæəkei̯d], some English speakers may be tempted to pronounce the corresponding French word as [baRəkad] instead of [baRikad].

Nasalized Vowels.

French has nasalized vowels which are distinct phonemes from oral vowels. With regard to their distinctive function, they stand, for all practical purposes, on the same level as oral vowels, and it is advisable to consider them homogeneous and unitary phonemes. It is to be kept in mind that in spite of the notation used, the nasalized vowels do not have exactly the same position of articulation as any of the oral vowels. For English-speaking students especially, the independence of nasalized and oral vowels should be emphasized. Nasalized vowels exist in English, but only as variants of oral vowels when these occur before a nasal consonant; for example: in words like *don't*, *man*, etc. Sometimes even, English speakers suppress the nasal consonant entirely and pronounce only a nasalized vowel; in such cases their pronounciation of the vowel of the English word *don't* differs relatively little from that of the French word *dompte*. In English, a nasalized vowel is never phonemically distinct from the sequence: vowel nasal consonant (m,n). The occurrence of a nasalized vowel here is mechanical-conditioned-and the English speaker has no conscious control over its occurrence. The French speaker, on the contrary, controls perfectly the difference between a nasalized vowel and and oral vowel. The difference between the two may serve to keep French words apart: *bas*/*banc*, *pot*/*pont*, *lin*/*laid*. At the same time a nasalized vowel in French is quite distinct from a vowel followed by a nasal consonant, as shown by the fact that a word like *canton* [kãtō] is distinct from *caneton* [kantõ]. It may be remarded that nasal vowels do not often occur before nasal consonants; such an occurence suggests the existence of a morpheme boundary between the nasalized vowel and the following *m* or *n*: *enneigé*, *emmener*, *en* *avant*, etc.; the words *ennui*, *ennuyer*, however, hardly lend themselves to such an analysis.

The nasalized vowels of French correspond only to the low and low mid oral vowels. The phoneticians who are interested in presenting "correct" i.e. traditional speech always list four nasalized vowels: /ã/, /ɛ̃/, /õ/, /ø̃/. However, many speakers, especially Parisians, do not distinguish between /ẽ/ and /õ/, and pronounce only /ẽ/. Today this confusion cannot be considered vulgar or popular, as a visit to the Sorbonne or to the Palace of Justice reveals. Since this confusion results in a definite sipmlification it seems advantageous for pedagogical purposes to confine the distinction between /ø̃/ and /ẽ/ to the domain of passive knowledge.

Nasal vowels are often difficult for English learners to produce at will. They often are replaced by a more or less nasalized vowel followed by a nasal consonant [m], [n], [ŋ]; this is not acceptable; although it is a general feature of Southern French usage, it is widely considered ludicrous elsewhere. For the production of French nasalized vowels, the tongue must at no time be raised so high as to stop the passage of the air through the mouth, for this results in the production of this parasitic nasal consonant. A way to test this is to pinch the nose; if all sound is arrested, this indicates that the tongue is too high. In all cases, in French, the lowering of the velum and the emission of the vowel sound must be simultaneous and perfectly coordinated.

French /ẽ/

/ẽ/ is a front spread nasal vowel. Its phonemic independence may be shown by the following comparisons:

/ẽ/ is nasal with respect to /ɛ/: quinte/quête, (see /ɛ/) fin/fée, teinter/téter;

/ẽ/ is mid (or better, non-low) with respect to /ã/: bain/banc, feindre/fendre, plainte/plante;

/ẽ/ is spread with respect to /œ̃/ (in the speech of those who distinguish between the two); empreint/emprunt, empreinte/emprunte, lin/l'un;

/ẽ/ is front-spread with respect to /õ/: bain/bon, quinte/compte, pincer/poncer.

From the point of view of French, this sound is sometimes described as a nasalized [ę]. However, its tongue position is lower than for French [ę]. For English speakers a practical procedure is to nasalize the English [æ] sound (as in hat, cad, etc.).

French /õ/

/õ/ is a back rounded nasal vowel, non-low. Its phonemic independence is shown by the following comparisons:

/õ/ is nasal with respect to /ɔ/: (see /ɔ/);

/õ/ is back-rounded with respect to /ẽ/: (see /ẽ/);

/õ/ is back with respect to /œ̃/: jonc/jeun;

/õ/ is non-low with respect to /ã/: thon/temps, boute/hante, poncer/penser.

The tongue position of this sound lies between that of French [ọ] and English [oə̯], somewhat closer to [ọ] than to [oə̯], and can be found by approximation. This sound is made with well-rounded lips, relatively, about as much as for French [ọ]. The latitude of degree of opening is towards greater opening than French [ọ]; [õ] pronounced with the degree of opening of French [ọ] sounds somewhat strange.

all French vowels [ã] is a pure vowel; it is never followed by a diphthongal glide: the lip and tongue positions remain stable throughout the emission of the sound; it is never [õu̯].

French /ø̃/

As already mentioned, this phoneme does not exist in the speech of most Parisians. The /ø̃/ has fused with /ẽ/. The result is that pairs of words like brin and brun, Alain and alun, empreint and emprunt, etc., are pronounced alike, all with the nasal vowel /ẽ/. For the speakers who do make the distinction between the two the following comparisons may be established:

/ø̃/ is nasal with respect to /ø/: (see /ø/);
/ø̃/ is front with respect to /õ/: (see /õ/);
/ø̃/ is rounded with respect to /ẽ/: (see /ẽ/);
/ø̃/ is not-low with respect to /ã/: un/en, humble/ amble, junte/jante

/ø̃/ may be described phonetically as a nasalized [ọ̸]. For the reasons stated above, it seems best not to teach this phoneme to English learners of French as an element to be acquired actively and to be reproduced by them in their French speech. Thus, the pronounciation of the indefinite article un would be taught as /ẽ/. This confusion of the two phonemes can hardly create difficulty for the student, certainly no more than the traditionally already existing homophonous words of the language.

French /ã/

French /ã/ is a low nasalized vowel. Its phonemic independence is shown by the following comparisons:

/ã/ is nasal with respect to /a/: (see /a/);

/ã/ is low with respect to /õ/, /ō/, /ø̃/: (see /ẽ/, /õ/, /ø̃/, respectively).

For practical purposes [ã] may be considered a nasalized French /á/. Many French speakers use a sound with a somewhat higher tongue position than French [â]. This, however, need not be imitated. In fact, the nasalization of the vowel English-speakers use in words like far, car, etc., passes quite well for French /ã/. It is important to avoid nasalizing a sound of the type French /à/, which could be confused with /ẽ/ (actually [ã]).

The neutral vowel [ə], called variously 'e muet', 'e instable', 'e caduc'.

The nature of this vowel is quite unlike that of the vowel phonemes described above. In certain cases, it has phonemic value as shown by pairs of words like la blette/la belette. But in most of its occurrences, its use is either optional and intermittent or predictable from the context, that is, without clear phonemic value. This behavior has been discussed elsewhere (pp. 30.22 to 30.27 of present draft).

French [ə] is pronounced by a majority of French speakers as a front-rounded mid vowel of the type [ø]. Orthoepists often describe its tongue position as intermediate between that of [ø̣] and [ø̨]. However, this sound varies from speaker to speaker and from context to context. The learner has several possibilities: 1) he may pronounce the sound indicated by orthoepists; 2) he may pronounce [ə] like [ø̣] so that pairs of words like: que/queue, me/meus, se/ceux, are pronounced the same or he may pronounce it like [ø̨] so that brevet/bRavẹ/ and the last two syllables of abreuvait /abRøvę/ sound alike. This latitude is quite acceptable and avoids the necessity of learning a new sound; 3) he may use the unrounded vowel sound found in final position in the English words: sofa, china, villa, but preferably, with some lip rounding added. Care must be taken not to use the final sound of words like fur, her, *burr*, as in the speech of persons who do not pronounce the final *r* in these words. This latter substitution is not perceived by French speakers as an acceptable equivalentə .

Because of the spelling, [e] is often confused by non-native speakers with /e/; both are written with the letter *e*. This is particularly objectionable; words like *lever*, *peser*, *crever*, *semi*, *brebis*, etc., all contain an [ə], not interchangeable with [ę] or [e̩].

[ə] is the sound French speakers use when they hesitate in their speech, as when groping for a word.

Accent and Intonation

The features of accent and intonation, are often classed together under the name of prosodic features. They characterize stretches of sound greater than individual phonemes, which have served as the central units of the study of the sounds of French. Accent is a feature superposed upon a syllable integrated in a sequence of syllables, and intonation concerns larger segments of speech - from the stress group to the sentence.

Accent

Accent refers to the prominence given to a particular syllable within a sequence in the spoken chain, the accented syllable contrasting with the unaccented syllables surrounding it. The prominence is obtained by various means, among which are a more energetic articulation and/or some characteristic pitch feature. This accentual prominence serves to signal the presence of meaningful lexical items, generally words, in the utterance. In order to completely define a word from the standpoint of its form in English, it is necessary not only to state which phonemes compose it, but also to indicate the place of the accent or stress of the word. This is necessary because in English this stress has no fixed, predictable place; it must be learned for each word as a part of its inherent characteristics; in some words it appears on the first syllable e.g. géneral; in others, on the second syllable: distínguish; in others, on the third syllable: Européan, etc. Even words related to each other do not show one particular syllable which serves regularly as the bearer of the stress; e.g. recíte and recitátion. Further, there are even words in English which may be distinguished by the place of their accent (the) ímport - (to) impórt, pérfect - (to) perféct. In addition to this, it is customary to further distinguish in English between several types or degrees of stress. In a word like tomahawk, the first syllable is heavily stressed, the second is the least stressed, and the third has a degree of stress that is intermediate between these first two. Some linguists even distinguish a greater number of relevant degrees of stress for English.

In French, the situation is quite different. It would not be accurate to say that all the syllables of a French utterance are pronounced with equal energy and prominence. But what is often called accent in French is both physically and functionally so different from English stress, that English speaking students had better start from the assumption that all syllables in French have some sort of medium stress.

We have just seen that the identity of an English word is not established unless the stressed syllable is indicated as such: there is not one word *import*, but two different words, *ímport* and *impórt*. There is nothing similar in French: a French word is exhaustively identified once its phonemes and their respective order have been indicated: *tableau* is /tablo/ and any prominence given to /ta-/ or to /-blo/ will not change the identity of the word.

In normal, daily, dispassionate use of spoken French, the syllable immediately preceding a pause may enjoy a very slight prominence. Now it is not immaterial for the understanding of what is said whether a pause appears here or there: *ramenez les vivants* with no internal pause or with one after *ramenez* means "bring back the live ones"; *ramenez-les vivants* with a pause after *les* means "bring them back alive". In the latter case, the pause after *les* is accompanied by a slight prominence on that syllable. In rapid delivery, the pause may well disappear, and only the slight prominence on *-les* distinguishes *ramenez-les vivants* from *ramenez les vivants*. It should however be kept in mind that any such prominence is always very slight and never entails the reduction and blurring of vowels in neighboring, "non-accented", syllables.

What is, in French, physically closer to English stress, is the prominence granted to the first syllable of any word which, for some reason, the speaker wants to mark off from the context. When, for instance, a teacher introduces a new word to his audience, say, *prosodique*, the first syllable, here *pro-* is likely to be pronounced more accurately and energetically; the quality of the vowels of the following syllables are not blurred in the process, but pronounced with normal energy and precision.

Prominence can also be used in French for expressive purposes. The same applies to English. In English, it is the syllable which bears the regular word stress which is pronounced with still greater energy : *a stűpid féllow*. In French, expressive accent falls on the first syllable of the word that needs emphasis, if that word begins with a consonant and on the second syllable if the first begins with a vowel: *mágnifique*, *détestable*, *impóssible*, *extrêmement*, *affreúx*. As a matter of fact it is less the syllable as a whole that is affected, than the initial consonant of that syllable; in the preceding examples /m-/, /d-/, /-p-/, /-t-/, /-f-/ are articulated with great energy and long duration.

Prominence for demarcative purposes, as in *prosodique* above, and prominence as an expressive and emphatic trick often fall on the same syllable, the initial one, and it is not always easy to tell which is which. With a word like *odieux*, where they do not coincide either can be heard in similar situations and contexts. Yet, real anger would probably entail emphasis on -*dieux*.

In English, extra stress is often used to direct the attention to some specific word in a context: e.g., *Jóhn loves Máry* (not *Anne*). French does not use any accent in such a case, but a different word order or grammatical constriction. The most common trick is the phrase *c'est...que*, *c'est...qui*: *c'est Jean qui aime Marie*, *c'est Marie qu'aime Jean*, *c'est sur ce point qu'ils ont buté*, *c'est moi qui l'ai fait* (E *I did it*).

Intonation

In connected speech, the sound sequences composing utterances are generally not all pronounced with the same pitch. The pitch of the voice tends rather to rise or to fall. The term intonation is used to refer to these movements of the melodic curve of speech. Taken narrowly it may be used to refer solely to what is left of the melodic curve when that part of it used for accentual pruposes is left aside. Actually, when allowances are made for the various kinds of accentual and phonemic difference between two languages, it is found that the intonations of most languages are approximately the same. In English, certain features generally described under the heading of intonation actually belong to the study of accent. In English, a fully accented syllable is characterized by considerable variation of the melodic curve, and such a stressed syllable shows most often a non-level melodic curve, as some kind of a fall from a high pitch.

In both French and English, the melodic curve that characterizes declarative sentences (and may be taken as basic) starts with a rise and ends with a fall. The initial rise is due to the fact that people normally start to speak before their vocal cords have reached the average degree of tension.

The final drop is due to the gradual relaxation of the glottis in anticipation of the coming pause. In the frame of this general pattern, any rise will be interpreted as an indication that something more has to come, and any fall will be felt to mark finality in all the senses of the word. Before a breathing pause, often indicated by a comma in the spelling, a rise is normal if the speaker wants the hearers to understand that he is not through yet. The rules of the game may vary slightly from one language to another but they do not differ basically. Besides, what may vary in matters of intonation is often found to vary more from one dialect to another within the same language than from one standard to another.

The main intonational differences between French and (American) English must result from the fact that English makes use of speech melody for accentual purposes(i.e., syllabic prominence) whereas

French hardly does outside of the expressive and emphatic domain. This explains why French speakers enjoy greater latitude in these matters and have the impression that intonation is not restricted to definite patterns.

This greater intonational freedom of French is well illustrated by the extensive use of the final rise as an interrogative marker. French has different ways of changing a statement into a question: inversion, as in il fait: fait-il?; addition of an interrogative marker, either specific as in il part: il part quand?, il part où?; or general, il part: est-ce qu'il part? Still the intonational marker, as in il part: il part? is probably the most commonly used in ordinary circumstances. In English, a rising intonation is also used to ask questions, but the height of the final syllable is generally felt by French hearers to be lower than that used in French in similar situations and contexts so that they are not always sure whether the sentence is a statement or a question.

A falling intonation is used in questions beginning with an interrogative word; such as où, pourquoi, quand, etc. Que doit-on faire? A quelle heure viendra-t-il? In such sentences, it is the interrogative word which generally bears the highest pitch and the intonation of the sentence falls from there on.

This intonation is also used for commands. The greater the pitch interval between the beginning and the end point of the command, the more peremptory the command is.

Another frequent intonation pattern often heard concerns parenthetical expressions of various kinds like appositions, appended words, e.g. messieurs, dit-il, etc., more generally even, something that in writing would be placed between dashes (—.......—) or that is felt to be accessory to the essential part of the sentence. often pronounced with a low, fairly level intonation slightly rising (non-final) or falling (final) according to the position it occupies in the sentence, but with lower pitch than the rest of the sentence and with the stress group rapidly uttered; e.g. Un jour, si nous avons le temps et l'argent, nous ferons le tour du monde.

The variety of intonation is extremely great and subject to variations that do not allow of analysis into discrete units except in a most general sense, as when opposing the rising intonation of a question to the falling one of an assertion. Once features of of emphasis or contrast are introduced into the expression, intonation patterns may be considerably modified. Breaks and changes of direction of the intonational curve serve to underline and organize the various parts of the sentence, according to whatever the speaker wishes to bring into relief.